

Infantry





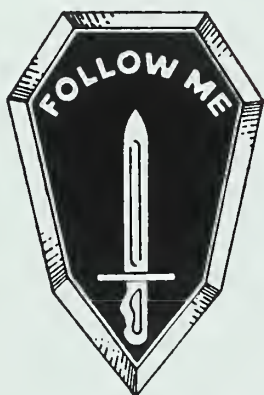
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This medium is approved for official dissemination of material designed to keep individuals within the Army knowledgeable of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development.

By Order of the Secretary of the Army

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Infantry

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FRONT COVER: Member of the 1st Cavalry Division on a search and destroy mission, by Peter Copeland, December 1967.

• **INFANTRY** is an Army professional bulletin prepared for bimonthly publication by the U.S. Army Infantry School at Building 1827, Fort Benning, Georgia. • Although it contains professional information for the Infantryman, the content does not necessarily reflect the official Army position, and it does not supersede any information presented in other official Army publications. • Unless otherwise stated, the views herein are those of the authors and not necessarily those of the Department of Defense or any element of it. • Official distribution is to infantry and infantry-related units and to appropriate staff agencies and service schools. • Direct communication concerning editorial policies and subscription rates is authorized to Editor, INFANTRY, P.O. Box 2005, Fort Benning, GA 31905-0605. • Telephone: (404) 545-6951; AUTOVON 835-6951. • Second-class postage paid at Columbus, Georgia, and additional mailing offices. • **POSTMASTER:** Send address changes to INFANTRY, P.O. Box 2005, Fort Benning, GA 31905-0605. • USPS Publication No. 370630. ISSN: 0019-9532.



Commandant's NOTE

MAJOR GENERAL CARMEN J. CAVEZZA Chief of Infantry

SMALL GROUP INSTRUCTION

At the Home of the Infantry, we have the institutional responsibility to train and develop junior infantry officers and noncommissioned officers to become the future leaders of our Army. Currently, the primary educational method of leader development within the U.S. Army Training and Doctrine Command (TRADOC) is the Small Group Instruction model. Small group instruction exploits the dynamics and the cohesion of small groups in order to stimulate learning. A small group instructor (SGI) is, in effect, a mentor.

By definition, a mentor is a trusted counselor and guide who has the commitment of a guardian and the sense of duty of a tutor. A mentor has a personal stake in the positive development of his subordinates because both mentor and student share the same profession. Creative thinking, bold initiative, a sense of vision—these are the fundamental and essential ingredients that must be considered in creating conditions that encourage and facilitate mentoring.

As I view the instruction here at the Infantry School, my belief is that mentoring adds the key ingredient to the foundation upon which effective instruction and leader development is built. Our small group instructors concern themselves with our small unit leaders' ability to handle the demands of the battlefield. It is this personal ingredient that distinguishes our SGIs from most instructors. They are responsible for training the Army's future company commanders, platoon leaders, and senior noncommissioned officers.

These instructors are carefully selected to serve in this very demanding and important assignment. The prerequisites for SGIs are successful tactical-level command experience, strong leadership traits, proficiency in combined arms tactics, physical fitness, and experience in training management and staff operations. They are soldiers who will set an example of leadership and professionalism for infantrymen to emulate, and who will mentor their students closely and continuously throughout the course.

This method of instruction differs significantly from the large classroom approach many of us experienced in earlier years when we attended courses at Fort Benning. The following conditions now form the basis of small group instruction:

- Warfighting is the basis for all instruction.
- Each student is responsible for his own learning.
- The focus is on "how to think," not on "what to think."

We require students to read most of the basic material outside the classroom. This allows the SGIs to focus their attention on broadening the students' education and training in the field and in the classroom.

In his seminar, a student must demonstrate his understanding of the material by participating in the learning process with his peers and the SGI. During this process the SGI emphasizes Army doctrine, the estimate process, the decision-making model, and the use of common sense. Students from different backgrounds share their experience and knowledge. They challenge each other to demonstrate their tactical skills.

I believe the result of small group instruction is a tactically sound, highly qualified leader who is prepared to lead and command infantry soldiers in combat. Comments from the field support this belief.

Visits to the classrooms and field training exercises indicate that the key to the success of this process is selecting the right people to be small group instructors. It is in our Army's best interest for commanders at all levels to help identify and recommend potential instructors for the Infantry School. We need your best senior captains and noncommissioned officers for these critical positions after they complete their troop-duty tours. The demands on an SGI are equivalent to those on a battalion S-3 in terms of workload, required maturity, knowledge of doctrine, tactics, training management, and time management. An SGI must also be a role model for his students.

Being an SGI is demanding, but it is also professionally rewarding. In return for his efforts, an SGI has an opportunity to teach and learn tactics on a daily basis. This opportunity for professional development is rivaled only by that offered at the Combat Maneuver Training Centers. Most important, an SGI has the privilege and responsibility to teach each year a division's worth of company commanders, platoon leaders, and senior noncommissioned officers.

Infantry units in the field need to participate in the selection of these key instructors.

Follow me!

INFANTRY LETTERS



AOE "NOT WORKING"

In August 1986, the 82d Airborne Division implemented TOE changes under the Army of Excellence (AOE) plan. While many of the changes were well thought out and did, in fact, exploit our new weapon systems and equipment, the plan was not without flaw.

First, there have been several problems in the infantry rifle platoon since the implementation of AOE.

The 11-man rifle squad was reduced to nine men. This was due in part to the addition of the M249 machinegun. The M249 added a degree of lethality to the squad. With the M249, M16A2, M203, and AT-4, the rifle squad was now more highly armed than at any previous time.

But what have we achieved when SSG X has only five men to deploy against the enemy? When he deployed to DESERT SHIELD (as part of the 82d Airborne Division, he thought he would see combat soon after arriving) his squad consisted of himself, the Alpha Team leader, the Bravo Team leader, and two privates (M249 machinegunners). Instead of *fire teams* he had *fire pairs*. Such a student-to-teacher ratio is fine for a small liberal arts college, but not for an airborne rifle squad.

It would be a wonderful Army if leaders could go to war with every one of their weapon systems manned by personnel who did not get sick, go to DA schools, or have to testify at courts martial. These were the actual reasons SSG X's squad deployed with only five of its eight assigned members.

If the Army would return to the 11-man squad, squad leaders would deploy with a total of seven or eight members instead of five. SSG X's fire team leaders are carrying the M16A2/M203 40mm grenade launcher. They now have to cover the squad's dead space in a

defense when they should be more concerned with controlling the rate and distribution of fire in their team. But then again they hardly have a team, do they?

It has been said frequently over the past few years that today's NCO is more motivated, intelligent, and knowledgeable than any of his kind before him. Explain this to the team leaders who get to exercise these abilities on one team member each. If the Army returned to the 11-man rifle squads,



these two sergeants could bank on a fire team of at least three or four men, even with attrition, sickness, and any other reasons a soldier would be "off the net."

Second, the elimination of the M60 machinegun ammunition bearer under AOE has created a big problem. The weight of the machinegun and its component parts has not changed. The weight of the ammunition has not changed. Neither has the weight of the night vision devices, binoculars, winter

packing lists, or the soldier's individual load. Yet we eliminated this third man in the crew.

For those who may not remember: As a weapons squad leader before AOE, this is how I cross-loaded my squad.

The M60 machinegunner carried the M60, 200 rounds of ammunition, AN/PVS-4, cleaning kit with range cards, and sidearm (the .45 caliber was the pre-AOE pistol).

The M60 assistant gunner carried the spare barrel, traversing and elevating mechanism, tripod pintle, asbestos glove, 200 rounds of M60 ammunition, cleaning kit, binoculars, and a sidearm. (Personally, I would have replaced the sidearm with the M203 grenade launcher to enable the assistant gunner to cover the dead space in front of the machinegun.)

The ammunition bearer carried the machinegun tripod, 400 rounds of ammunition, the M16 rifle with 5.56mm ammunition, cleaning kit, and any radio or telephone equipment that the squad might be augmented with. (The ammunition is based on a basic load of 800 rounds.)

With AOE, none of this equipment has been deleted except the assistant gunner's sidearm. Yet two men are now carrying what was quite a load for three. Take into account that the two-man crew must still pack required items when going to the field as well as comfort items that no soldier likes to give up.

Not too long after AOE was implemented, my platoon participated in a platoon live fire assault course. I watched my soldiers struggling to fire and move while carrying the M60, tripod with T and E and pintle, spare barrel bag complete, M16A2, 600 rounds of 7.62 ball ammunition, binoculars, and all their load carrying equipment. If ever a weapon system was designed for three men, it was the M60.

Since the two-man crew was implemented, I have rarely seen a machinegun crew drill being conducted. The field manual for the M60 machinegun, FM 23-67, gives a detailed outline of how crew drill is to be conducted — with three men, not two. Crew drill, of course, is a useful tool that a leader can use to instill teamwork, confidence, and a working knowledge of the system into his crew members. To do it correctly, though, I must augment the M60 crew with another platoon member. While this may be excellent cross training for that soldier, he is not an assigned part of that gun crew.

The Army of Excellence is now more than four years old. While the concept of a light, lethal rifle platoon was an idea whose time many thought had come, it is not without flaws. We, today's infantry leaders, need to accept these mistakes, correct them, and drive on.

JOE MORLEY

SSG

3d Battalion, 504th Infantry
Operation DESERT SHIELD

ITVs IN BRADLEY UNITS

The conversion to the Bradley MTOE in the near future necessitates a review of the Echo Company in the line battalions. In short, retaining the M901 ITV in a Bradley infantry battalion makes very little sense for the following reasons:

- Every M2A2 Bradley has a TOW II capability.
- The M901 is a complex, "quick fix" system that is difficult to maintain at the best of times.
- The M901 will not be able to keep up with the M2A2 in maneuver; in fact, it cannot keep up with the M113A2 now.
- There are no conceivable missions for the M901-equipped Echo Company other than in the defense. With the reduction of the possibility of war in Europe, the U.S. Army will become more offense-oriented in the near future. Our current mission in Saudi Arabia is a case in point.

An issue related to the retention of

the Echo Company is the scout platoon's conversion to HMMWVs (high mobility multipurpose wheeled vehicles). Although this concept was tested at the National Training Center (NTC), the test failed to duplicate artillery fire against soft vehicles. The scouts have also lost the Bradley's excellent night observation capabilities. Scouts are now vulnerable to all arms fire and are limited in night observation — not a particularly good trade-off, in my view.

One solution to these problems would be to put the HMMWV scout platoon in Echo Company and give that unit the specific additional mission and training of a reconnaissance/counter-reconnaissance company. The NTC has shown repeatedly that winning the recon/counter-recon battle is essential to successful combat operations. A part of the counter-recon battle is to kill the enemy's recon assets — something HMMWV scouts can no longer accomplish effectively. In this solution, the scout HMMWVs would work in close coordination with the M901s, with the M901s providing a night vision capability plus overwatch fires if necessary.

A better solution would be to take the six M3 Bradley cavalry vehicles the scouts were slated to get at one time and put them in Echo Company in place of the 12 ITVs. The scheduled force reductions in Europe and the continental United States should also make it possible to raise the count to eight M3s per Echo Company. Again, the Echo Company mission would be recon/counter-recon and antiarmor. The unit structure would be two platoons of four M3s each and a HMMWV scout platoon.

There are enough structure spaces within the current Echo Company and scout platoon MTOEs to achieve the required spaces with some left over. Those remaining slots should be used to create dismount teams for the M3s, another area where we are habitually short in the recon/counter-recon battle.

There is obviously still a need, even in a Bradley battalion, for a designated antiarmor company with which to influence the tank-mechanized infantry battle at the decisive place and time.

But an M901 antiarmor company is not the best we can do for the Army of the 21st Century, or even of the 1990s.

We are still weak in the recon/counter-recon capability with HMMWV scouts. I strongly recommend that we mount Company E in either M2 or M3 vehicles and add the scout platoon to that unit. This configuration would afford the ground combat battalion the greatest latitude.

E.W. CHAMBERLAIN III

LTC, Infantry

1st Battalion, 18th Infantry

Operation DESERT SHIELD

11TH AIR ASSAULT MATERIALS NEEDED

The National Infantry Museum needs material dealing with the 11th Air Assault Division (Test), activated 7 February 1963 at Fort Benning and inactivated 1 July 1965, also at Fort Benning.

Photographs are especially needed, as are pamphlets, manuals, and other printed material dealing with its equipment and history. (Photographs should be labeled as to date and what or who is pictured as completely and accurately as possible.) Also needed are uniforms (especially fatigues), equipment, and mementos.

Anyone who has items to donate may contact Mr. Z. Frank Hanner, Curator, National Infantry Museum, Building 396, Fort Benning, GA 31905-5273; telephone AUTOVON 835-2958 or commercial (404) 545-2958.

Photographs and other printed matter can be mailed directly to the above address without prior contact. Other items should not be sent until the museum has determined that there is a need for them in the collection.

TED C. CHILCOTE

COL, U.S. Army

Director of Plans, Training
and Mobilization
Fort Benning, Georgia

BATTLE OF DONG HA

Having written *Battle for Hue, Into Laos, Death Valley, and Into Cambodia*, I am now researching a proposed book on the Battle of Dong Ha (April-May 1968). In addition to Marine Corps and Navy personnel, this battle also involved the 3d Battalion, 21st Infantry, 196th Infantry Brigade, Americal Division, at Nhi Ha, and advisors with the 1st ARVN Division.

I would greatly appreciate hearing from any veterans of these actions so I can arrange interviews.

Write or call me at 200 Kingsville Court, Webster Groves, MO 63119; (314) 645-1867 or 961-7577.

KEITH WILLIAM NOLAN

**INFORMATION SOUGHT
ON FORT SEWARD, ALASKA**

Plans are under way to create an interpretive center at historic Fort William H. Seward in Haines, Alaska. Later renamed Chilkoot Barracks, the fort's turn-of-the-century buildings still guard the waters of Alaska's Inside Passage.

The interpretive center, which will portray life in a frontier Army fort from 1902 through World War II, will be dedicated in the summer of 1992 during a reunion of Army veterans who served in Alaska.

The Haines Chamber of Commerce is seeking information, artifacts, pictures, and memorabilia from the fort and also plans a series of taped oral histories on the fort and military life.

The Chamber is also seeking the names and addresses of people who served at Fort Seward-Chilkoot Barracks, or those of their descendants. For

more information, please write to me at Box 518, Haines, AK 99827, or call toll free 1-800-458-3579 (FAX 907-766-3155).

CYNTHIA AUKERMAN
Haines Chamber of Commerce

FIRST DIVISION REUNION

The Society of the First Division (Big Red One), which is composed of men who served in World War I, World War II, Vietnam, and in peacetime, will hold its 73d Annual Reunion from 10 to 14 July 1991 in San Jose, California.

For further information, please contact me at 5 Montgomery Avenue, Philadelphia, PA 19118; telephone (215) 836-4841.

ARTHUR L. CHAITT
Executive Director

**AMERICANS WITH
CANADIAN FORCES**

I am trying to get in touch with any Americans who served in the Canadian forces during World War II.

My address is 82 Florizel Avenue, Nepean, Ontario, Canada K2H 9R1; telephone (613) 996-1388.

FRED GAFFEN
Military Historian

**2d INFANTRY DIVISION
ASSOCIATION**

The 2d Infantry (Indianhead) Division Association wants everyone who ever served in the 2d Infantry Division to become members of the association.

The address of the association's national headquarters is P.O. Box 460, Buda, TX 78610.

BILL CREECH
National Secretary

**GUIDE DOG INSTRUCTOR
POSITIONS AVAILABLE**

Guide Dogs for the Blind, Inc., offers career opportunities for military personnel who have experience and interest in working with dogs.

The organization's 11-acre campus is the base for a program that trains pure-bred dogs as guides for blind people who qualify.

Applications for paid staff positions as instructors and instructor assistants are being accepted through the Department of Training, Guide Dogs for the Blind, Inc., P.O. Box 151200, San Rafael, CA 94915.

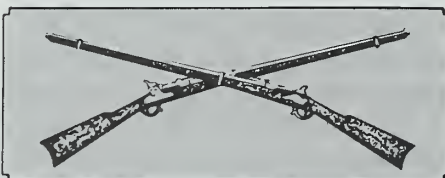
JENNIFER CONROY
Publicity Office

HORSE SOLDIERS

I am interviewing old horse soldiers — cavalrymen, remount service personnel, field and pack artillerymen — for a book length project: *Hoofbeats into History: An Oral History of America's Last Horse Soldiers*. Since infantry units for many years had pack mules assigned to them, I would also be delighted to send my questionnaire to old infantrymen.

Anyone who is interested may write to me at 5518 East 36th Street, Tulsa, OK 74135; or call (918) 665-3146.

STEPHEN B. McCARTNEY



INFANTRY NEWS



CHIEF OF INFANTRY UPDATE

EDITOR'S NOTE: The Chief of Infantry Update, formerly published separately, has proved to be a good way to keep the field informed of actions designed to improve the efficiency and effectiveness of the infantry force.

To save the expense of printing and

distributing a separate publication, the pages of INFANTRY are now being used to publish the same material.

As before, infantrymen in the field are encouraged to comment on the items that appear here and to suggest topics they would like to see covered

in the future. Address your suggestions to Commandant, U.S. Army Infantry School, ATTN: ATSH-TDI, Fort Benning, GA 31905-5593, or call AUTOVON 835-2350/6951 or commercial (404) 545-2350/6951.

THE SMALL ARMS MASTER Plan (SAMP) is the cornerstone document for the research, development, and acquisition of small arms in the 1990s and beyond.

SAMP is a living document that incorporates the latest user and developer ideas and capabilities. It reflects the user's concept of small arms in the execution of AirLand Battle Future, his vision of a weapon system that increases his capability, and multiple routes for evaluating candidate systems and technologies that will lead to the development and fielding of an Objective Family of Small Arms (OFSA).

This modernization process will initially replace seven antiquated weapons with six new ones and will subsequently replace those with three technologically revolutionary weapons.

The strategy occurs in two time phases. The near-term effort implements six new weapons including optics with current evolutionary technologies. Fielding and improving the near-term weapons will sustain the individual soldier's combat capability until the objective systems can be developed and fielded.

The near-term weapons are the MK 19 MOD3 grenade machinegun, the M249/A1 machinegun, the M16A2/A3 rifle, the M24 sniper weapon system,

the M4 carbine, and the M9 pistol. Fielding and improving these weapons gives units increased combat effectiveness, weapon and ammunition commonality, and reliability, and emphasizes lightening the soldier's load.

The far-term effort is a revolutionary break with the historical incremental development of rifles and rifled bullets. This objective applies new and emerging technologies to significantly increase the individual soldier's combat effectiveness. This endeavor envisions a three-member family that consists of an individual combat weapon, a crew-served weapon, and a personal defense weapon. Innovative technologies such as full-solution fire control, micro-electronics, and composite materials, coupled with bursting munitions, flechettes, or multiple projectiles will provide the soldier with leap-ahead capabilities on the future battlefield.

The Small Arms Master Plan is a joint user/developer plan of action. A materiel developer's technology blueprint supports the user's desired objectives. The user identifies the variables for a required trade-off analysis, and the blueprint shows key decision points where the best technical approach will be determined. The plan discusses the decision criteria to be used at these points.

Using the Concept Based Requirements System, the SAMP is the user's statement of the required small arms capability he needs to execute AirLand Battle doctrine and the developer's blueprint for reaching these goals. It is a long-term roadmap designed to give direction to a coherent small arms program.

An oversight panel of lieutenant generals has been organized to function as an executive overview committee for all actions pertaining to the Small Arms Master Plan. The panel meets annually to provide requirement guidance and to approve key program and developmental decisions.

Small arms will continue to play a decisive role on the battlefield of the future. Implementing the SAMP will exploit existing and evolving technologies to give our soldiers the weapons they will need to win on that battlefield.

ARMY TRAINING 21 places greater emphasis on distributed training strategy to reduce the Army's outlay of resources for conducting effective training.

Embracing this new strategy, the Distributed Training Branch, Course Development Division, Directorate of Training and Doctrine, at the Infantry School is now developing interactive

videodisc programs that include the following:

Threat Vehicle Identification	29 lessons
Target Acquisition Enhancement Devices	11 lessons
Bradley Fighting Vehicle Skill Level 1-3 Tasks	59 lessons
TOW Trainer Course	47 lessons
Infantry Mortar Platoon Course	171 lessons

The fielding of this courseware will begin during FY 1992.

THE OFFICE OF THE TRADOC System Manager for Soldier Systems (TSM-Soldier) has been established at Fort Benning.

The office will integrate doctrine, training, leadership, organization/force structure, and materiel solutions using the Soldier Modernization Plan as its basis. Its focus will be on the items a soldier consumes, wears, or carries for his individual use in the field. The ultimate purpose will be to increase the soldier's battlefield capabilities of lethality, command and control, protection, sustainment, and mobility, and to see that a soldier is treated as a system.

Colonel Richard D. Anderson is the current TSM-Soldier. His address is Commandant, U.S. Army Infantry School, ATTN: ATSH-TS, Fort Benning, GA 31905; AUTOVON 835-1189.

A SAFETY MESSAGE has been issued by the Army's Armament, Munitions, and Chemical Command (AMCCOM) concerning projectiles stuck in M16 series rifles. Seven

incidents have been reported in the past year, and these have caused injury to personnel and damage to weapons.

TM 9-1005-319-10 warns: If a noticeable difference in sound or recoil is experienced, stop firing. Either condition could indicate an incomplete powder burn and/or a bullet stuck in the bore (page 1). Page 75 of the same TM contains the following warning: If an audible "pop" or reduced recoil is experienced during firing, immediately cease fire: remove the magazine, lock the bolt to the rear, place the selector lever on the "SAFE" position, and visually inspect the bore or insert a cleaning rod into the bore to ensure that no bullet is stuck in it.

This warning is followed by: Do not apply immediate action. If a bullet is stuck in the barrel of the weapon, do not try to remove it. Turn the weapon in to the armorer.

Under some conditions, the operator may mistake the audible "pop" as the sound the hammer makes when it falls. If the weapon does not fire, check the bore.

Any time the charging handle has to be used to remove a cartridge case from the weapon, there is a chance that a projectile is lodged in the bore. Many times, it is lodged so close to the chamber that the round that follows will not fully chamber, and the forward assist must be used to seat the round. Or the user thinks he has had a second malfunction and uses the charging handle to remove that round also. In either case, the projectile is moved far

enough forward to allow a round to be chambered and fired, which results in a catastrophic failure.

It is therefore advised that if the forward assist must be used or the charging handle is required to remove a spent cartridge case from a rifle, the weapon should be cleared and the barrel checked for a lodged projectile.

Other references for this problem are TM 9-1005-249-10, M16/M16A1 Rifle, February 1985, page 2-32; and TM 9-1005-309-238P, M231 Firing Port Weapon, August 1986, page 2-31.

THE 1991 INFANTRY CONFERENCE will be held at Fort Benning, Georgia, 9-12 April. Administrative instructions and conference agendas have been sent to those who will attend.

The School's POC is COL Gary A. Jones, Chief, Office of Infantry Propensity, AUTOVON 835-4621/4624.

FIELD MANUAL 23-1, Bradley Fighting Vehicle Gunnery, is scheduled to be in the field by the end of March 1991.

The manual is intended to provide Bradley units with gunnery theories, methods, and techniques; a description of system features and capabilities; and a program for training and evaluating individual, crew, section, and platoon proficiency in Bradley gunnery.

The School's POC is Ms. Capraro, Publications Division, Directorate of Training and Doctrine, AUTOVON 835-7662.

REGIMENTAL PLAQUES from infantry regiments in the U.S. Army are being sought by the U.S. Army Infantry Training Center, Fort Benning, Georgia. Any plaques donated will be used to decorate the Regimental Chapel of Infantry located at Sand Hill.

Since this is where all infantrymen receive their initial introduction to the infantry, and since thousands of guests visit the Sand Hill area each year, the Center wants the chapel to represent the infantry — Active Army, U.S. Army Reserve, and Army National Guard.

The plaques should be no smaller than 8 x 10 inches and no larger than 11 x 14. A one-page copy of the regimental history should be sent with each plaque to: Commander, U.S. Army Infantry Training Center, ATTN: OIC, Regimental Chapel, Bldg. 3220, Fort Benning, GA 31905.

Additional information is available from Chaplain (CPT) David Reese, AUTOVON 784-9269/9458; or commercial (404) 544-9629/9458.

A HANDBOOK OF DECEPTIVE techniques and procedures for tactical units is being written by the Combined Arms Command's Deception Division. This handbook will contain information about the building of field expedient decoys, the use of multispectral close combat decoys (MCCDs), and procedures that can help small units survive and gain a tactical advantage over threat forces.

As the Army gains experience with deception and decoys, we need to get the word to all units so the force can

be more effective. Your ideas and experiences, therefore, can help other units in the field.

If your unit has built field expedient decoys, has found additional uses for the MCCDs, or has used tactical procedures to gain surprise or a maneuver advantage, the division needs to hear about them and the effects your procedures could have on mission accomplishment.

Send your information to Commander, U.S. Army Combined Arms Command, ATTN: ATZL-CDA-B, Fort Leavenworth, KS 66027; or call SFC Dave Westall at AUTOVON 552-4503, commercial (913) 684-4503.

THE EXPANDED STOP-LOSS policy, effective December 1990, applies to all active duty soldiers, with few exceptions. Previously, stop-loss applied only to soldiers who were determined to be in direct support of Operation DESERT SHIELD, were deployed or about to be deployed, or had skills or specialties that were considered critical to the operation.

This expanded stop-loss policy now includes requests for voluntary retirements of less than 30 years. Medical retirements or the retirement of soldiers who have reached their Retention Control Points (RCPs) or officers with mandatory retirement dates are not affected by this new policy.

Further, soldiers who are ineligible to reenlist are now affected. The exceptions are soldiers who are ineligible to reenlist as a result of DA bars imposed under the Qualitative Management Program (QMP).

Soldiers may request exemptions from the stop-loss restrictions for compelling or compassionate reasons, and each request will be considered individually. Exemptions based solely on plans for schooling or promises of jobs do not merit approval.

Local commanders may disapprove requests that have no particular merit. If approval is recommended, however, requests must be forwarded to PERS-COM, ATTN: TAPC-PDT-S for enlisted personnel or TAPC-PDT-R for officers.

All requests for stop-loss exemptions

must be approved by the Secretary of the Army for Manpower and Reserve Affairs.

THE U.S. ARMY OFFICER Candidate Alumni Association, Inc., has received many inquiries about the 50th Anniversary of the OCS program. This joint activity between the 3d Battalion (OCS), 11th Infantry, and the Alumni Association has been rescheduled and will be held in conjunction with the OCS Hall of Fame induction 22-24 May 1991.

The Alumni Association welcomes inquiries concerning the anniversary celebration and membership in the association.

Regular membership in the Alumni Association is now open to graduates of any Officer Candidate School. Associate membership is available to non-OCS graduates who served as staff and faculty members at an OCS and other persons who have made and will continue to make significant contributions to the OCS program. Annual dues are \$10.00 for either class of membership.

Anyone who is interested in joining may write to Secretary, The U.S. Army Officer Candidate Alumni Association, Inc., P.O. Box 2192, Fort Benning, GA 31905.

THE NATIONAL INFANTRY Museum at Fort Benning, Georgia, has provided the following notes:

- An informal ground-breaking ceremony for the First Infantry Division monument was held 7 December 1990 on the museum grounds. All members and former members of the division who were in the area were invited to participate.

- A recent addition to displays in the Medal of Honor Room is a uniform belonging to the late Major General George Mabry. When a lieutenant colonel assigned to the 2d Battalion, 8th Infantry, 4th Infantry Division, he was awarded the medal for action in the Hurtgen Forest near Schevenhutte, Germany on 20 November 1944. He

advanced alone across a mine field under heavy hostile fire to establish a safe route of passage for his battalion. Along the way, he personally captured, at bayonet point, three enemy soldiers who were in foxholes, then led an assault against three log bunkers housing other enemy soldiers with automatic weapons, overcoming them with the assistance of his scouts. He then led his battalion across 300 yards of fire-swept terrain to seize elevated ground upon which he then established a defensive position that provided a firm foothold on the approach to the Cologne plain.

- The museum has continued with its conservation of fragile artifacts that are tattered and worn or otherwise showing their age and use. Recently, for example, professional conservation measures were applied to the Fifth Infantry Regiment colors that were carried into battle during the war with Mexico and to an early 19th century coat. Another improvement soon to be in place is new carpeting for the first and second floor public areas, to be purchased with nonappropriated funds.

- A graduate student in museum studies was recently assigned to the museum for a directed research project on the history of Fort Benning. The result was the first comprehensive historical outline from the post's establishment to the present time. Included in the outline are important events such as Presidential visits and dates when various units were assigned to the post as well as when they left. The outline will be used in presenting historical programs and as a research aid.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership or \$10.00 for a lifetime membership.

Additional information about the museum and the society is available from the Director, National Infantry Museum, Fort Benning, GA 31905-5273; telephone AUTOVON 835-2958, or commercial (404) 545-2958.

PROFESSIONAL FORUM



Soviet ATGM Countermeasures

MICHAEL R. JACOBSON

For many years, the North Atlantic Treaty Organization (NATO) and, in particular, the United States Army have emphasized the use of antitank guided missiles (ATGMs), and the Army has spent a lot of time and money developing, acquiring, and fielding ATGM systems and training operators.

We must, therefore, pay more attention to the countermeasures an opponent might use to prevent our ATGM gunners from hitting their targets. We must also look at ways of defending against those countermeasures.

The Soviets, for example, emphasize various ways of countering ATGMs: reconnaissance, destruction, deception, and combined arms operations. We can assume, of course, that other forces trained and equipped by the Soviet Army (such as Iraq, for example) will use the same countermeasures.

Reconnaissance. While the Soviets emphasize reconnaissance in all of their operations, they recognize its particular importance in locating and targeting ATGM systems. Since a commander uses his reconnaissance as the basis of his decision making, the intelligence must be correct, and he attempts to verify it by any means available to him—airborne reconnaissance, signal intelligence, and ground reconnaissance.

Airborne reconnaissance is accomplished by fixed wing aircraft, helicopters, and drones that use photography,

infrared detection, television, and side looking airborne radar (SLAR). To counter these reconnaissance methods, an ATGM unit must use all available concealment, infrared defeating camouflage nets, hide locations, and dummy positions to present a false picture.

Signal intelligence gathering includes using direction finding to locate radio transmitters and monitor radio traffic. Even when the ATGM units use secure radios, the Soviets can jam the transmissions or use direction finding to locate and target the transmitters.

The Soviets' ground reconnaissance organizations include the reconnaissance battalion in each motorized rifle or tank division, the reconnaissance company in each motorized rifle or tank regiment, and the combat reconnaissance patrol (CRP) of each maneuver battalion.

These units use BRDM-2s or BTRs, BMP-Rs, BMPs, tanks, and motorcycles. A reconnaissance battalion has 340 men and is equipped with six tanks, three BMP-Rs, 12 BMPs, and 15 BRDM-2s or BTRs. A reconnaissance company has 55 men and is equipped with one BMP-R, three BMPs, four BRDM-2s, and three motorcycles.

These units form reconnaissance patrols, usually about three vehicles, that use overwatching movement techniques and covered and concealed routes to reconnoiter ATGM positions. They are tasked with identifying,

locating, and reporting on routes, enemy minefields, and dispositions. Soviet reconnaissance units routinely try to capture prisoners, from whom they expect to get significant information.

A CRP is a fighting patrol that consists of a motorized rifle platoon (three BTRs or BMPs) reinforced with a tank and possibly engineer reconnaissance (BRDM-2) or chemical (BRDM-2rkh) assets. The patrol's mission is to provide prompt information on their opponent's strength, composition, activities, and direction of movement or location. A CRP tries to penetrate the opponent's reconnaissance screen to get information about the main body. It operates up to 10 kilometers, or 20 minutes, in front of the forward security element (FSE) of its own advanced guard.

The FSE is normally a motorized rifle company reinforced with a tank platoon, an engineer platoon, a mortar battery, and an artillery battery. Its mission is to move behind the CRP and engage and fix the opponent's elements. Using its mobility and firepower, it attempts to seize and hold key terrain for the commitment of the advanced guard's main body.

Additionally, the Soviets may dispatch a forward patrol consisting of a maneuver platoon to operate between the CRP and the FSE. This forward patrol

attacks known or suspected enemy positions to gain information. Their mission is to cause their opponent to react and thereby reveal his disposition, strength, and fire plan.

Soviet commanders expect to receive 75 to 95 percent of their needed intelligence before the attack. Our units, therefore, must conduct effective counter-reconnaissance operations to negate as much as possible the Soviet reconnaissance effort, and particularly those aimed at locating our ATGM positions. They must learn to identify reconnaissance vehicles, formations, and operations and their plan must include how to deal with the various types of Soviet units in clear, understandable terms.

Destruction. Once the Soviet reconnaissance effort has identified and located their opponent's ATGM positions, the positions will be targeted for destruction. Soviet combined arms tactics identify the artillery, attack helicopters, tanks, and motorized rifle arms as having major tasks in defeating an opponent's antitank weapons.

ATGM positions are priority targets for Soviet artillery, and the Soviets use firing norms to plan artillery operations. Firing norms are established for ammunition expenditure, the expected area coverage, the effect on the target, and the density of fire over time. The Soviets define five categories of target damage and effect—annihilation, destruction, neutralization, suppression, and harassment.

- **Annihilation** means the target is combat ineffective, which requires enough rounds to achieve a kill probability of 70 to 90 percent against an ATGM position.

- **Destruction** (a sub-element of annihilation) means a target position has been rendered permanently unusable.

- **Neutralization** means the targeted position has lost 30 percent of the unit occupying it and has temporarily lost its combat effectiveness.

- **Suppression** means the target has temporarily lost its combat effectiveness.

- **Harassment** means the soldiers in the target position cannot rest or move and will suffer low morale.

The firing norms also control reaction times. The average reaction time from the receipt of the fire mission until the first round hits the ground is 60 to 90 seconds for a motorized rifle battalion's organic 120mm mortar battery and two to three minutes for the regiment's organic 122mm artillery battalion. The Soviet-developed norms govern how many rounds of artillery they will fire at a target. To suppress an ATGM position, they would fire 40 rounds for observed fire or 140 rounds for unobserved fire of 120mm mortar or 122mm howitzer ammunition.

U.S. and NATO ATGM systems are not designed to survive such intense artillery barrages. A unit must therefore depend upon remaining undetected. ATGM units should not be located on terrain that the Soviets are likely to target with artillery, and when a unit does come under heavy artillery fire, it should move.

Soviet attack helicopters are normally used after the artillery preparation is complete. They seek routes that allow them to approach the flank of their opponent's forces undetected. In a meeting engagement, attack helicopters screen and support their units as they maneuver into position. Soviet helicopters operate in pairs and attack ATGM positions with their own ATGMs or 57mm rockets. Depending on which ATGM a helicopter is equipped with, its effective range is between three and five kilometers; the effective range of the rockets is about 1,500 meters. Helicopters with ATGMs are also employed to counterattack armored or mechanized forces.

Soviet tanks carry three types of main gun rounds—armor piercing fin stabilized discarding sabot (APFSDS), high explosive antitank (HEAT), and high explosive fragmentation (HE-FRAG). More than half of the Soviets' basic load for tanks and BMP-1s is HE-FRAG ammunition, which is used to suppress ATGM sites and fighting positions. The BMP-2 also carries both high explosive and fragmentation rounds that are effective in suppressing or damaging ATGM systems and gunners.

The Soviets have fielded tanks similar to the Sheridan that are capable of firing an ATGM through their main guns. The T-64B and T-80 tanks are known to fire the AT-8 Songster ATGM, which has a maximum range of 4,000 meters. It is believed that the primary role of missile firing tanks is to destroy armor and antiarmor systems such as the Bradley fighting vehicle (BFV), the improved TOW vehicle (ITV), and attack helicopters.

Another Soviet weapon that could be effective in suppressing ATGMs is the AGS-17 automatic grenade launcher. It is similar to the U.S. Mark 19 grenade launcher but fires a 30mm instead of a 40mm round. The AGS-17 has a maximum range of 1,730 meters, which gives the Soviet infantry an area suppression capability. It also has some capability against lightly armored vehicles such as the ITV and the BFV. Each Soviet motorized rifle battalion has six AGS-17s.

Other suppression methods the Soviets may use against ATGM positions are searchlights and lasers. Thus, a flashing high intensity searchlight with the proper frequency and intensity can confuse an ATGM gunner and reduce his tracking performance by 50 to 100 percent.

Laser rangefinders and laser target designators can cause temporary or permanent injury to the eyes of soldiers using direct view magnifying optics. Laser filters or thermal image intensifier devices will protect a gunner's eyes against these.

To defend themselves against these Soviet capabilities, an ATGM unit should be set up in hide positions, move after hitting a target, and engage an entire enemy unit instead of individual vehicles.

- **Deception.** The Soviets' deception doctrine, which they call *Maskirovka*, calls for the use of camouflage paint, camouflage nets, screens, and smoke screens to protect their armored vehicles from ATGM fire.

While they use camouflage paint sparingly in peacetime, they do use camouflage paint patterns during hostilities to blend armored vehicles into

the background. They use camouflage nets and covers extensively to hide, disrupt identification, and conceal armored vehicles. They put up screens, similar to privacy fences, to block observation, and these can be several kilometers long.

The Soviets attempt to use covered and concealed routes and to move at night to limit the effectiveness of ATGM defenses. Minefields and artillery fires placed on these routes can force them into ATGM kill zones, and we must be prepared to fight at night using our night vision devices or other illumination means.

The Soviets use three types of smoke screens to counter ATGMs—blinding, camouflaging, and decoy. They use blinding smoke screens to blind enemy gunners, observation posts, and target acquisition systems, thereby restricting their opponent's ability to engage their forces effectively; camouflage smoke screens to conceal their location, movement, and intentions; and decoy smoke screens to deceive their opponents as to the actual location of their forces and their probable direction of attack.

The Soviets believe that when they conceal their positions with smoke they decrease their opponent's hit probability by 25 percent, and that when they place smoke on an enemy gunner they decrease his hit probability by 90 percent.

Soviet combat vehicles have two methods of producing smoke. Most have a vehicle engine exhaust smoke system that sprays diesel fuel into the exhaust

manifold to produce camouflaging smoke to protect a unit during movement. All Soviet armored vehicles have smoke grenade launchers, which provide a rapid means of screening the vehicles. The smoke from these systems interferes with daylight and image intensifier (or starlight) scopes. While thermal sights enable a gunner to see through some smoke, he may not be able to maintain control of his missile through it and may therefore lose it.

Finally, the most effective screening agent is dust kicked up by artillery and tracked vehicle movement; it blocks out thermal, laser, and direct view optics. This dust can become suspended in smoke and restrict the capability of our thermal sights.

• **Combined Arms.** The Soviets fight as a combined arms force. A Soviet motorized rifle battalion is usually reinforced with a tank company, an artillery battery or battalion, and an air defense section. They prefer to fight mounted and assault at 20 kilometers per hour. If they are facing a strong enemy antitank capability, however, they will assault dismounted. In this situation, the infantry dismounts 1,000 meters from the forward edge of the battlefield. The tanks lead moving at six kilometers per hour, followed closely by the dismounted infantry, which engage personnel and antitank weapons. The infantry's BTRs or BMPs follow 100 to 400 meters behind the tanks and fire through the gaps between them. The ZSU 23-4 or 2S6 air defense guns follow about 400 meters behind the

maneuver elements.

In addition to all of these ATGM countermeasures, Soviet tanks also have reactive armor. This armor consists of explosive boxes bolted to the outside of a tank and is designed to defeat shaped charge or HEAT munitions. The Soviets began fielding reactive armor on their T-64B and T-80 tanks in 1984. Additionally, the explosion when a missile hits may cause the gunner to believe he has destroyed the target, until it moves and shoots back.

In summary, ATGM training programs must emphasize the use of cover and concealment, counter-reconnaissance (security), and positioning in places where the Soviets are less likely to use artillery or smoke. If smoke is used against a unit or if it is hit by artillery fire, it should move to an alternate position. To improve its survivability, an ATGM unit should plan to destroy entire units at the same time. Finally, ATGM crews must know what their weapons can do and train with those weapons in a realistic environment. Only then will they improve the effectiveness of their missiles.

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Low Intensity Conflict What Captains Should Study

COLONEL RICHARD T. RHOADES

A couple of years ago while assigned to the Infantry School, we in the Tactics Department wrestled with the question,

"What should the captains in the Infantry Officer Advanced Course study about low intensity conflict

(LIC)?" At that time we didn't feel we had come up with a satisfactory answer. There were several reasons for our

uncertainty that many others in the Army will find familiar.

After our Vietnam experience, our professional literature put aside the topic of low intensity conflict as we went back to the more dangerous and more clearly defined European threat. There was great disagreement in the defense community as to what LIC really was and what its component elements were. There was not even an agreed upon definition. We also knew that our preparedness to cope with a Warsaw Pact threat had deteriorated during our Vietnam experience and that with President Reagan's help, by gosh, we were going to get that problem fixed before worrying about LIC.

Times have changed, as we all know. Even before the Berlin Wall came down, many realized that we had to study and be well prepared to deal with "military operations short of war." As a result, the Center for Low Intensity Conflict (CLIC) was created, and it has since done a lot of good work in both research and writing. Most significant, however, were the directives stemming from the Goldwater-Nichols Act of 1986 that established an Assistant Secretary of Defense for Low Intensity Conflict and created the U.S. Special Operations Command (SOCOM). Both of these high level actions reflected genuine concern—not only in the Army but also in the Department of Defense and throughout the country—that we had better be ready for low intensity conflict. (Without question, the *Mayaguez* Incident, Desert One, and Grenada also greatly influenced this feeling.)

The bad news in all of this is that LIC remains a broad term that encompasses support for insurgency and counterinsurgency, combatting terrorism, peacekeeping operations, peacetime contingency operations and, most recently, counter-narcotics operations.

The good news is that the Infantry Officer Advanced Course now deals extensively with all categories of LIC and that there are now numerous case studies, articles, and reports—and a few manuals—on the subject. My purpose here is not to offer specific answers but to stimulate the curiosity of junior officers and suggest some areas they

might examine as they pursue their professional reading on LIC. The selected readings shown in the accompanying box should get them started. For a thorough study, they can gain a tremendous collection of valuable insights from the cases of Lebanon (both 1958 and 1983), the Dominican Republic, Grenada, and Panama.

My own readings of these and other publications have led me to the highlights that follow, which cover a compendium of issues that captains should examine as they prepare for low intensity conflict.

As in all other military operations, informed actions begin with a good look at intelligence. The key thing to remember in LIC is that there are many sources and indicators to consider that are seldom used in our "conventional" experience. It is amazing, for example, the amount of valuable information that is available in a local library. It is a handy, easily accessible source of generally good information on the culture, geography, and social conditions of little known countries around the world. Obviously, the larger libraries usually have the most current information.

In addition, civil agencies may have invaluable information. Leaders should coordinate with and "collect" from folks like the State Department (the Embassy, once in country) and the Central

Intelligence Agency. Local police and armed forces also have a great deal of valuable information, and we must be in constant touch with them.

Leaders should be familiar with the "nature of insurgency," which is spelled out in Field Manual 100-20, Military Operations in Low Intensity Conflict, and which has also been the subject of considerable study by CLIC. Insurgency indicators do not fall into the normal lexicon of intelligence targets.

Since LIC is often conducted in an urban environment, we must learn the unique aspects of urban terrain. For example, what constitutes "key terrain" in an urban environment? Is the high ground in a park as important as a television or radio station?

Another unique area of valuable intelligence is local customs and courtesies. If we are going to enjoy any long term success in LIC, we know that we must "win the hearts and minds" of the people, and customs and courtesies are a part of that process.

Operations in low intensity conflict are almost always constrained by prescribed "rules of engagement" (ROEs). Leaders should become familiar with typical ROEs and understand how and why they are established, along with their positive and negative aspects.

Again almost assuredly, operations in LIC will be conducted in coordination with, or in combination with, local

SELECTED READINGS

Adkin, Mark, *Urgent Fury*, Lexington Books, Lexington, Massachusetts, 1989. The best explanation of what happened in Grenada.

Bolger, Daniel P., *Americans at War, 1975-1986*, Presidio Press, 1988. Operations in "an era of violent peace".

Greenberg, Lawrence M., *United States Army Unilateral and Coalition Operations in the 1965 Dominican Republic Intervention*, U.S. Army Center of Military History, 1987. From a joint and combined arms perspective.

Spiller, Roger J., "Not War But Like War": *The American Intervention in Lebanon*, Leavenworth Papers Number 3, Combat Studies Institute, Fort Leavenworth, Kansas, January 1981. Covers Marines and Army soldiers in Lebanon, 1958.

Yates, Lawrence A., *Power Pack: U.S. Intervention in the Dominican Republic, 1965-1966*, Leavenworth Papers Number 15, Combat Studies Institute, Fort Leavenworth, Kansas, July 1988. The 82d goes in to prevent chaos.

FM 90-8, *Counter guerrilla Operations*, Department of the Army, August 1986. A fascinating mix of operational theory, tactics, and techniques.

FM 100-20, *Military Operations in Low Intensity Conflict*, Department of the Army/Department of the Air Force, December 1989. A good overview of some of the civil-military problems.



forces. Leaders need to understand how that coordination is effected, the best way to conduct liaison, and how local armed forces (or police) should be integrated into our units or operations. All of this is made easier if our units can train with local forces, before and during LIC operations.

Special operations forces (SOF) have unique capabilities and are, in many ways, specifically designed to operate in a LIC environment. Leaders in other types of units must gain an understanding of SOF capabilities and operations. Coordination between SOF and conventional forces is essential, and each can increase the effectiveness of the other.

There is a body of skills a unit needs to conduct successful operations in an urban environment. Urban navigation, for example, includes more than just reading street maps; it involves navigating across rooftops and through storm sewers. Soldiers must also know how to clear and search a building and how to get effective and precise fire support in a city without causing a lot of collateral damage. In a LIC environment, it is even more essential that a commander know who his expert shooters are, because they will frequently be required to engage selected small targets.

Small units are often called upon to operate roadblocks, and there is a way to do this effectively and safely if the leaders think about it beforehand. Arrest and apprehension are skills that are frequently called for in LIC, but not generally found in line units. Although a LIC environment may be technolog-

ically unsophisticated, U.S. forces must still exploit their technological advantage. They must know, for example, where to get the power to run their computers and how their computers can help them win in this environment. This technological advantage also means conducting night operations using our night vision devices.

Command and control in LIC presents its own set of new challenges. Perhaps most important is the business of integrating the efforts of different force multipliers on the battlefield. Our leaders must understand the major contributions that such units as Psychological Operations (PSYOPS), Civil Affairs, Military Police, Engineer, and Judge Advocate General make on the LIC battlefield.

In addition to the contribution of SOFs and the requirement for coordination with local forces, leaders must also remember that their efforts in the end must support the efforts of the country team as directed by our ambassador.

Finally, some unusual logistics requirements and solutions will undoubtedly grow out of a LIC operation. These are best and most quickly solved if they are studied in advance.

Population care and control needs particular attention because the real target of operations is a friendly populace. Besides PSYOPS and civil control measures, line units often seem to find themselves involved in such things as looking after public health and sanitation, and providing food and water to the needy. Leaders must decide who will do these things and how.

Leaders must also make sure their soldiers know that success may depend as much on how well they treat the local non-combatants as on how effectively they eliminate threat forces.

An examination of our most recent LIC experience, Operation JUST CAUSE in Panama in 1989, reveals some other truly unusual concerns in a LIC environment. Before deploying, soldiers may need some understanding of the vagaries of diplomatic immunity and should be prepared to deal with a broad array of news media representatives. Finally, not unique to LIC but worth studying anyway is the topic of women in combat—how, where, and when they will be employed.

Military operations in low intensity conflict clearly require a new level of sophistication and a knowledge of many tactics and techniques that are entirely new to much of our "conventional wisdom." If recent history is an indicator of the future, all Army leaders need to be ready to operate in this environment. In addition to special operations forces, we have seen our heavy and light, Active Army and Reserve Component conventional forces fully engaged in low intensity conflict. If we are to continue our history of military excellence, we must study and prepare now for low intensity conflict operations.

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Philosophy of Command

And Commander's Guidance

MAJOR DREW A. BENNETT

Because of the pace of operations on the modern battlefield, the range of possible conflicts, and the use of mission type orders, a commander will find it necessary to formalize his intent. A good commander, however, will begin to develop his philosophy of command and his commander's guidance long before the deployment of his troops.

A philosophy of command covers a commander's general beliefs about the way things should work in a perfect world. A commander's guidance covers specific instructions for day-to-day operations, most of which will be in a peacetime environment.

Upon assuming command, an officer will find it beneficial to give definite shape to his philosophy and guidance by putting it in a written document and issuing it to his immediate subordinates. At company level, this is particularly important in orienting and guiding inexperienced and impressionable platoon leaders.

Although each commander's philosophy and guidance will reflect his own personality, style, and priorities, as a company commander I found the following philosophy and guidance effective in communicating to my junior officers what I wanted done and how I wanted it done.

PHILOSOPHY

Responsibility. *A leader is responsible for everything his unit does or fails to do. You are responsible for ensuring that your troops are fed, paid, quartered, rested, physically conditioned, supplied,*

administratively processed, informed, trained, motivated, and rewarded, as appropriate. Others — the S-1, S-2, S-3, S-4, XO, first sergeant, police sergeant, or anyone else — may assist you, guide you, monitor you, and evaluate you, but only you are responsible.

Every member of this company must believe that his chain of command cares about him and will look out for him. If a soldier has a problem, he must know that his leaders will do everything in their power to assist him and continue to do so until his problem is corrected. While this responsibility will be a serious burden for you, it will also be the source of enormous satisfaction if you exercise it right.

Authority. *As an officer, you are entrusted with a significant amount of authority. When carrying out my intent, you may act in my behalf with all of the authority that my billet carries with it. If you make an honest mistake, I will back you even if you are wrong. Whatever kind of mistake you make, no one will reprimand you without my approval; I will act as a buffer between you and higher headquarters so that you can do your job.*

This does not mean that you will be protected if you display incompetence or negligence. It does not imply that you may use any means possible to accomplish your desires. We operate within a system, and I expect you to make that system work. I do not believe in the "midnight requisition," for example, or telling your men, "I don't care how you do it, just get it done." Operating within the system does not

rule out using ingenuity and initiative. It is these two traits that will make you successful on the modern battlefield. Many of the problems you will face will not have an exact solution or a procedure that you can pull from a manual or another written source. Remember that you are a leader with the authority to determine what is right, what is wrong, and what needs to be done.

I do not subscribe to the "zero defects" philosophy (except in matters concerning integrity). You and I will make mistakes. When you make a mistake I will point it out to you. Don't get your feelings hurt, and don't think that I am generally unhappy with you. My purpose is only to increase your potential as an officer and a leader. Just don't make the same mistake twice.

Integrity, however, is the bedrock of the officer corps. Without it you will never get the cooperation of your subordinates, the respect of your peers, or the trust of your seniors. In this profession, honesty is not just the best policy, it must be the only policy. You can recover from a deficiency in any other leadership trait, but not from a lapse in integrity.

Supervision. *I don't believe in micro-management, but I do believe in supervision. It is impossible to lead from behind a desk. You should be with most of your unit most of the time, and if you want your orders carried out, you will have to supervise. As the old adage goes, "You get what you inspect, not what you expect."*

As for me, I will be present, observing your unit both in the field and in

garrison. I don't want you to stop training when I am there or to prepare a "dog and pony show" for me. Additionally, don't be intimidated if I offer negative feedback. I will not allow errors to pass uncorrected.

Readiness. *Our mission is to fight, and we don't have the luxury of knowing when, where, or for how long. Consequently, you must maintain a state of readiness — mentally, physically, and materially — both in your personnel and in yourself. When we go into combat (note I did not say "if" we go into combat), it will be too late to take care of family problems, train your men, improve your upper body strength, or turn in damaged equipment. You may never achieve 100 percent readiness, but if you don't make readiness a priority, your unit will never survive the first firefight.*

Leadership. *The people in your unit are no better and no worse than those who win division competitions or go to the Olympic games. But you have already been issued the personnel, and if you want the best unit in the world all you need to do is exercise the proper leadership. I challenge you to make this your goal.*

To gain the willing obedience of your unit, be enthusiastic and tactful. Anyone can be a bully; it takes more to be a leader. But you are not running a popularity contest. There is only one standard and you must enforce it.

GUIDANCE

Safety. *In combat the mission will come before the welfare of the troops, and their safety will depend on their training. In peacetime, however, nothing is more important than safety. This does not mean we cannot train aggressively but we must also train safely.*

Safety will be enforced on and off duty, on and off post, and everyone is a safety officer. An injury caused by a lack of safety reduces our combat power just as much as an injury caused by the enemy.

Training. *Use every available second of time to train. Battles are won during*

training.

- *Don't wait for someone else to train your unit.*

- *A unit is only as good as the weakest person in it.*

- *Dead time will be used for concurrent training. All platoon leaders and platoon sergeants will carry a contingency lesson plan with them at all times and be prepared to teach that class whenever the opportunity presents itself. Use every available second of time to train.*

- *Every class will have a complete lesson plan, a prepared instructor, appropriate training aids, practical application, and evaluation.*

- *Instructors will rehearse.*

- *The training schedule will be followed as to time, date, place, and duration unless officially changed by the appropriate authority.*

- *Hope and luck have nothing to do with success. Skill and training defeat fear and ignorance.*

Mission Accomplishment. *When I give you a task, you have three options:*

- *You can complete the assigned task by the deadline.*

- *You can come in well ahead of the deadline and explain to me why you cannot complete the task. For example, because of the situation or other commitments, you may need more time, guidance, men, money, or supplies.*

- *You can come in and tell me you refuse to perform that task. (Be very careful using this option, but I would expect you to refuse to perform a task you considered unethical, illegal, or immoral.)*

Putting me off or just not accomplishing the task by the deadline is not an option. The primary criteria I will use to evaluate you will be how you and your unit accomplish the mission.

I do not believe in nonconcurrency through silence. If you don't agree with something, speak up and say why. You may be right! It does no good to say — after an exercise or training evolution — "I knew that was a bad idea."

When I pass guidance, information, or orders to you and you walk out the door, I am convinced from that point on that you understand, you want to

obey, and you are able to obey. If that is not the case, don't walk out and allow the conversation to end. That is your responsibility, not mine. If you show me a better solution, I will either do it your way or explain to you why I can't or won't.

Finally, although I am open to discussion, once a decision has been made I expect complete compliance with the spirit and the letter of my orders. Dissension and sarcasm have no place in the company.

First Sergeant's Role. *The role of the first sergeant is not just administrative. Because of his acknowledged level of experience, he is also the source of advice on a variety of issues, and I value him highly. At the same time, I realize that he is not exempt from rendering military courtesy. He is available to all members of the command and will serve as the company mentor, and I encourage you to learn from him. If you differ with the first sergeant, remember that he has the company's interests at heart.*

I will ask his advice on all enlisted matters and many other issues. His presence will be felt throughout the command as an example of success. (I have often noticed that officers who need the first sergeant's assistance least are the ones who ask for it the most and those who need it the most are the most resentful of it.)

Personal Example. *Your actions speak louder than words. Your example establishes your credibility and provides a constant communication that cannot be misunderstood.*

Remember that you are a leader 24 hours a day; you are never "off duty." Your personal appearance should always be immaculate, in and out of uniform. You must represent the highest standard, never the minimum. In front of the troops there is sometimes a place for humor, but never for horse-play.

In the field, you should endure the same hardships as those around you and then some. Be the first one up and the last to sleep. Eat last, after everyone else has been fed. Clean your weapon yourself; do not have anyone else clean it for you.

Professionalism. A true professional does not look at a difficult task and expound on why it cannot be done. He looks at it and then finds ways of doing what needs to be done. Be positive and enthusiastic at all times.

- Be proactive instead of reactive. Anticipate problems and requirements. Remember that "time spent in reconnaissance is never wasted."

- Be in the right place at the right time in the right uniform and ready for the task at hand. Be well-prepared with your subordinates, with your peers, and with your seniors.

- Spend at least as much time and effort rewarding the people who work for you as you do punishing them.

Generally speaking, for every Article 15 there should be a certificate of commendation, and for every court martial conducted, a medal awarded.

I trust that my philosophy of command and guidance will help you understand what is expected of you beyond the tried and true leadership traits and principles. I am convinced that no job is more challenging and personally rewarding, or more fun, than that of an infantry second lieutenant. I want you to come in happy and proud every day. Because of the demands of your job and the nature of our business, there may be days when you leave proud but unhappy, but those days should be few and far between. If that

is not the case, let me know. I want you to enjoy your job as much as I intend to enjoy mine.

A commander who formalizes his philosophy of command and his commander's guidance and issues it in writing to his subordinates will find that his company functions better, both in peacetime and in times of conflict.

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U-COFT Effectiveness

WALTER G. BUTLER

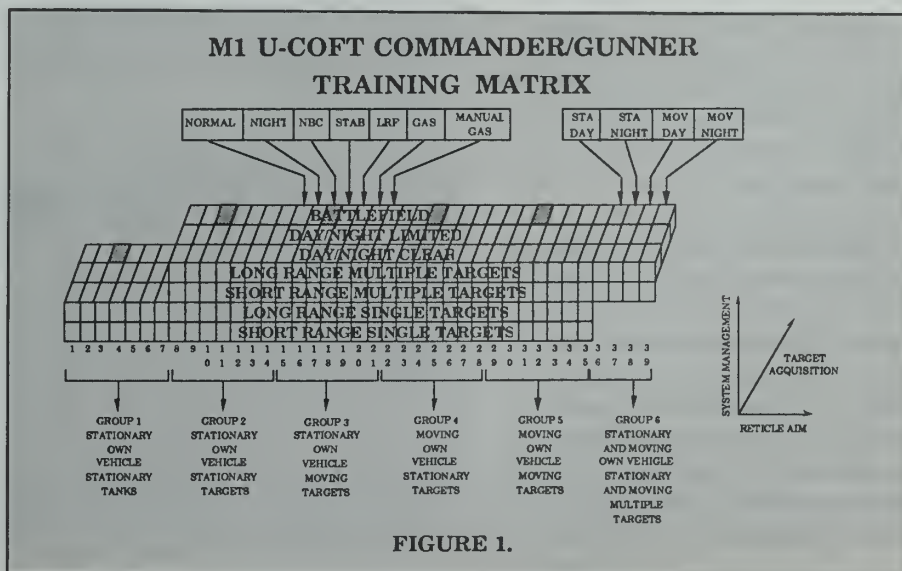
The Unit-Conduct-of-Fire Trainers (U-COFTs) for the M1 tank and the M2 and M3 Bradley vehicles are part of the Army's program of developing and fielding training simulators. U.S. Army commanders have available to them a wide array of training equipment that is designed to help maintain or improve the performance of the soldiers and units in critical combat skills. Along with this training equipment, however, commanders also need objective information on the effectiveness of the equipment in a field environment and on ways of integrating it into the unit's training program. This information is now available for the U-COFTs.

A U-COFT provides training to vehicle commander and gunner teams that was previously available only on live fire ranges, and allows a team to train in a simulated vehicle crew station in a series of engagements with one or more threat targets portrayed through

computer-generated imagery. The engagements can occur under situations of day or night, with clear or reduced visibility conditions, in a clean or contaminated environment, with a fully operational or degraded vehicle, and in

an offensive or a defensive posture.

They are organized into exercises, with each having five to ten engagements. The exercises, in turn, are arranged in a training matrix (Figure 1). An instructor/operator (I/O) can



select the appropriate exercise to meet a specific need of a team, or he can allow the simulator's computer to present the next exercise on the basis of a team's earlier performance. The U-COFT has many features that allow the I/O to provide meaningful feedback to the team both during and after a training exercise.

The U.S. Army Europe (USAREUR) received its first M1 and M2/M3 U-COFTs in 1985 and located them at the 7th Army Combined Arms Training Center for use in new equipment and transitional training. These devices were fielded incrementally during the next few years on the basis of one per battalion. Unit commanders received guidance concerning minimum usage rates and some suggested training procedures.

Post-fielding training effectiveness analyses of the M1 U-COFT (1986) and the M2/M3 U-COFT (1988-89) provided answers to certain basic questions raised by Army leaders and field commanders concerning the benefits of U-COFT training and how a unit could best use the device as part of its overall gunnery training strategy. (*AUTHOR'S NOTE: The primary sources for this article are the briefings and test reports for the M1 and M2/M3 U-COFT Post Fielding Training Effectiveness Analyses. Both studies were conducted by the Grafenwohr Field Office of the TRADOC Analysis Command, White Sands Missile Range. Mr. Charles R. Hughes was the primary analyst for both studies.*) The M1 study involved 357 crews from six tank battalions while the M2/M3 study used 452 crews from five mechanized infantry battalions and three armored cavalry squadrons.

The studies used the live fire crew qualification exercise (Table VIII) as the test of effectiveness. Table VIII consists of ten single or multiple target engagements, each of which is worth up to 100 points, depending on how quickly a crew hits all of the targets. Each crew normally fires Table VIII twice a year.

While Table VIII may not address all areas of U-COFT training, it is the Army's standard for determining crew gunnery proficiency. It also has an

obvious relationship to the combat requirements for engaging enemy systems as well as to many of the skills that can be trained by the U-COFT. The studies showed that the U-COFTs are effective trainers that can provide general indications of expected performance on live fire exercises and can compensate for some reduction in the availability of training ammunition.

Crews that trained on the M1 U-COFT exhibited better crew coordination than those that trained using conventional methods only. When performance on Table VIII was compared for the two groups, the U-COFT-trained crews averaged significantly faster opening times (time to fire the first round) while obtaining the same first round hit percentage (see accompanying table).

Particularly telling were the results of a second (Special) Table VIII fired by M1 crews selected from the test battalions. The main criterion for selecting a crew to fire the second Table VIII was for the commander and gunner to have fired the previous Table VIII together. This second Table VIII firing, which occurred approximately 90 days after the first, was conducted in the same manner except that the crews received no preliminary live fire training (Tables VI and VII).

An analysis of the change in performance between the two exercises indicates the effectiveness of the training the crews received during the 90-day period between firings. For the crews selected from the U-COFT battalions, this training was conducted primarily on the U-COFT.

The crews that had progressed

through the U-COFT matrix to at least reticle aim group 3 tended to improve their scores from the previous Table VIII (45 percent gained 100 points or more). By contrast, the crews that were still in reticle aim group 1 or 2 tended to lose points (41 percent lost at least 100 points). Gains and losses were fairly evenly spread across the categories for the crews that had not trained on the U-COFT (Figure 2). These results indicate that the U-COFT can provide effective sustainment training to crews that use it often enough, or well enough, to progress beyond the lower regions of the training matrix.

A similar analysis of the performance of 70 M2/M3 crews provided more insight. These crews fired a second Table VIII, with no preliminary live fire training, from five to nine months after a regular Table VIII. In this case, 67 percent of the crews had lower scores than before with 34 percent scoring at least 100 points less. These crews had an average score of 910 on the first Table VIII and of 82 points less on the second.

If one could assume that the performance of these crews would be similar to that of the M1 crews after 90 days, then it appears that unit training (including U-COFT but excluding live fire) cannot be expected to sustain an extremely high level of gunnery performance over long periods of time. Still, these crews did average a superior performance rating with 828 points on Table VIII with no live fire training over five to nine months. For 55 crews that formed after the first Table VIII and fired the second with no live fire training, the average score was 738, which is above the minimum score of 700 for

COMPARISON OF TANK TABLE VIII RESULTS FOR U-COFT AND NON U-COFT GROUPS

TEST GROUP	NUMBER OF CREWS	PERCENTAGE TOTAL SCORE	OF FIRST ROUND HIT	-----OPENING TIMES-----		
				OFFENSIVE*	DEFENSIVE*	OVERALL*
NON U-COFT	58	763	80	7.3	4.1	5.7
U-COFT	291	792	79	5.9	3.4	4.7

* STATISTICALLY SIGNIFICANT DIFFERENCE, P<.01, T-TEST

RELATIONSHIP BETWEEN CHANGE IN TT VIII SCORES AND U-COFT MATRIX STATUS AT SPECIAL TT VIII

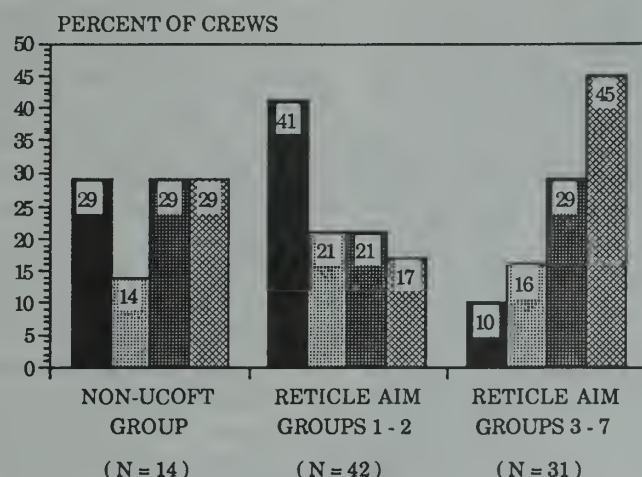


FIGURE 2.

qualification. The sustainment training program using the U-COFT did maintain an acceptable level of gunnery proficiency. Crew stability and especially gunner experience on Table VIII were important contributing factors.

The results from the second M2/M3 Table VIII led to some important observations. The 70 crews, at least the commander and gunner, who fired both Table VIIIs together also trained together during the intervening five to nine months. The average score of these "stabilized" crews was 90 points higher

(828-738) than the crews formed during the interim period. An even more interesting contrast occurred between 91 crews in which the gunners reported having fired at least one prior table VIII and 27 crews in which the gunners reported no prior Table VIII firings (Figure 3).

The crews with experienced gunners averaged an impressive score of 152 points higher (820-668). The average score for crews with inexperienced gunners was below the minimum qualification score, while there was little

difference between experience levels after the first Table VIII.

This is strong evidence for the value of providing live fire experience for a new gunner, particularly from a deployability standpoint. Of course, the 70 "stabilized" crews were among the 91 crews with experienced gunners. This leaves 21 crews for which the gunner had Table VIII experience but was paired with a different commander from before. The difference in average scores for these two groups was only 32 points (828-796). Having an experienced gunner overcame about two-thirds of the difference in average Table VIII scores between the stabilized and unstabilized crews.

The effect of U-COFT on these observations is unknown, because no control group was available that had not trained on the U-COFT. The indication here, however, is that in a unit training environment that includes U-COFT, stabilized crews generally perform better than unstabilized crews, but the gunners' prior Table VIII experience had a greater overall effect. If live fire opportunities are reduced, unit commanders can consider giving priority to the crews with gunners who have *not* fired a recent Table VIII. Neither crew stabilization nor gunner experience had much effect when crews were allowed to train on the live fire prequalification tables before Table VIII—all groups averaged more than 870 points.

The studies provide valuable information to commanders and trainers concerning ways of using a U-COFT to improve performance on Table VIII without training specifically for it and thereby sacrificing the device's combat training value. There was no payoff in having crews "crash" on the U-COFT to try to get into the higher region of the training matrix. On the second Table VIII for the M2/M3 study, the 74 crews in reticle aim groups 5 and 6 had an average score of 803 while the 36 crews in groups 3 and 4 averaged 811.

While progress through the matrix was generally associated with better performance on Table VIII, the relationship is built on skills learned, practiced, and reinforced on the U-COFT instead

M2/M3 U-COFT PFTEA JOINT IMPACT ON TABLE VIII SCORES OF PRELIMINARY GUNNERY TABLES AND GUNNER'S EXPERIENCE

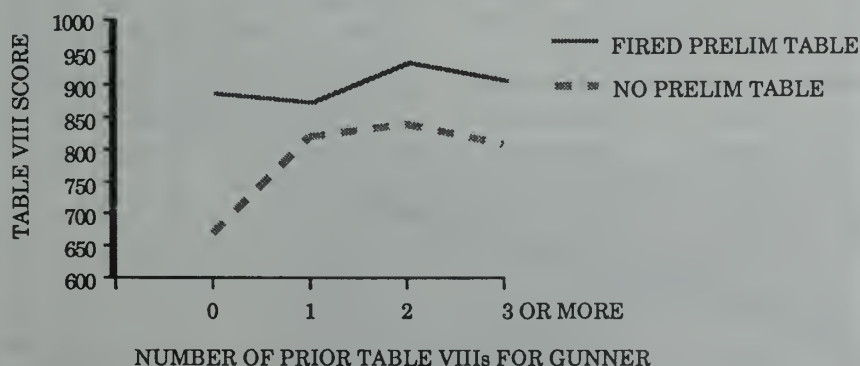


FIGURE 3.

RELATIONSHIP BETWEEN RATE OF PROGRESS THROUGH THE MATRIX AND PERFORMANCE ON SPECIAL TABLE VIII

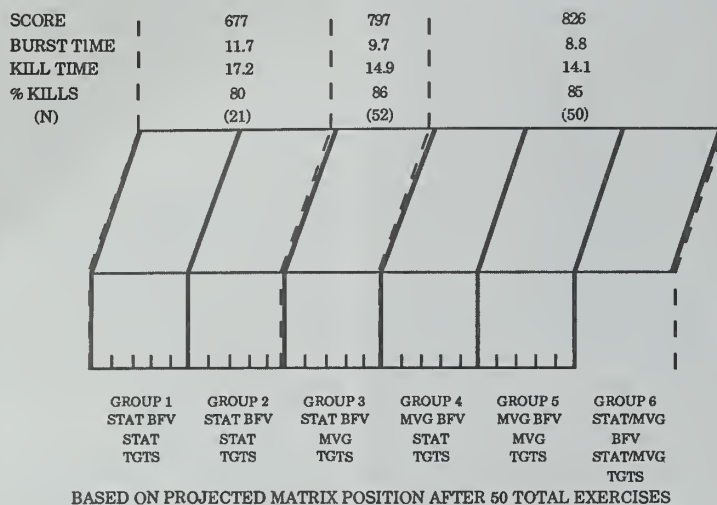


FIGURE 4.

of simply an ability to get through the matrix as an end in itself. In this sense, U-COFT training that is administered in regularly occurring sessions of reasonable length is probably the most beneficial.

From a crew's performance on the U-COFT, commanders can gain insight into how that crew might be expected to perform on a Table VIII exercise without firing the preliminary live fire tables. Results from both studies indicate that reticle aim group 3 is an important factor in determining expected gunnery performance. The M2/M3 study specifically examined the relationship between a crew's rate of progress through the matrix and its subsequent performance on Table VIII.

The findings in Figure 4 indicate that the commander should examine the matrix progress of a crew when it has completed 50 U-COFT exercises. (A crew that receives two hours of U-

COFT training per month should reach 50 exercises in four to five months.) If the crew has not yet reached reticle aim group 3, its expected Table VIII score, on the basis of the performance of similar crews during the study, would be 677; if it is in group 3, its expected score would be 797; if it has reached group 4 or beyond, its expected score would be 826.

Of course, these relationships, though statistically significant, are not perfect. There was much variation among the crews, and any external events that may be slowing a crew's rate of matrix progress deserves consideration. But the commander can use these general guidelines to determine when remedial training may be necessary and, if ammunition is restricted, which crews may not need to fire the preliminary tables before firing Table VIII.

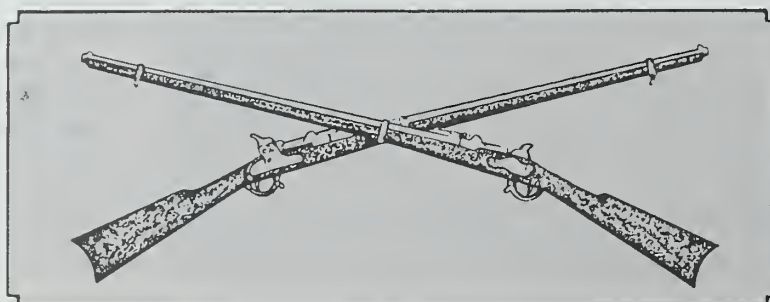
The Army used reductions in training ammunition to offset part of the cost

of the U-COFT program. After an M1 battalion received its U-COFT, for example, each crew's annual allocation of main gun rounds was reduced by 24 the first year and by 10 more the following year. As a result, the armor community gave up 34 rounds per crew per year to pay for the U-COFT. The results from the M1 U-COFT study indicate that the device compensated for this reduction in terms of performance on Table VIII. Three U-COFT battalions were restricted from firing Table VI in preparation for the first Table VIII. This reduced each of the affected crews' live fire practices by about 15 rounds. Their performance was better than that of crews trained without the U-COFT and only slightly worse than that of the other U-COFT-trained crews, even though the two latter groups fired more practice rounds.

The U-COFT provides effective training to M1 and M2/M3 vehicle commanders and gunners. Unit commanders and their training staffs can use the U-COFT to monitor the proficiency of their soldiers and to better prepare them for conducting target engagements under both Table VIII and combat conditions.

U-COFT training allows commanders to shift some of their scarce ammunition resources from crew-oriented events to exercises that incorporate sections, platoons, or higher echelons. The U-COFT devices themselves are an important part of today's combat training.

Walter G. Butler was assigned to the TRADOC Analysis Command's White Sands Missile Range Field Office (TRAC-WSMR) in Grafenwohr, Germany when the analyses cited in this article were conducted. He is currently assigned to the Unit Training Effectiveness Analysis Directorate of TRAC-WSMR. He holds a master's degree from Florida State University.





Training the Trainer

Colonel John D. Fuller

In recent years, the Army has devoted a great amount of time, effort, and resources to training its soldiers in how to fight. Our literature, training devices, and training centers all reflect this focus. In spite of some dramatic training improvements, however, we are still missing the mark. Our training efforts at the institution and unit levels will never be as good as they could be unless we concentrate our future efforts on training the trainer.

Training the trainer is an inherent function of leadership. All leaders must also be trainers. As stated in Field Manual 25-100, "Training is not merely the rightful concern of leaders, it's their obligation." Today, our institutions are not

producing leaders who are competent trainers—leaders who know how to train others or how to develop training competencies in their subordinates. To achieve the full potential of our recent training initiatives, therefore, we must strive for a better balance in our efforts to train our leaders not only how to fight but also how to train.

In the past, we have assumed that if an individual soldier, leader, or trainer could perform a particular task to standard, he could train someone else to perform that same task to standard. In fact, however, we have never spent much time training our leaders in the specific tasks or techniques associated with being good trainers or coaches.

The technique for developing a trainer that most of us have observed during our Army careers might be described as more of an apprenticeship approach in which there is no structured or standardized process. An apprentice learns by watching others. After a period of time he becomes a craftsman and, with the accumulation of additional advanced skills, may eventually become a master craftsman. There are few if any stated criteria for being labeled a craftsman other than a master craftsman's stamp of approval.

Much the same is true in the method the Army uses to develop an NCO trainer. After observing his mentor for a time, he is thrown into the training breach and is expected to perform at the same level of proficiency as the more experienced NCO. Generally speaking, there is no testing or certification to indicate whether or not the trainer has been prepared satisfactorily for his training mission.

Obviously, there are some flaws in our present system of developing trainers, whether it takes place in an institution or a unit:

- There are few criteria for standards in which a novice trainer must demonstrate his proficiency before he becomes an instructor or a trainer.
- There is no scientific methodology for determining what a trainer should be required to do.
- There are no identified trainer tasks, conditions, or standards.

SYSTEMS APPROACH

In brief, we have not applied the systems approach to training to the tasks a trainer has to perform. Essentially, we have said—either consciously or unconsciously—that if a trainer can perform a task to standard, he is capable of training soldiers to perform that task. In fact, in some cases we seem to put a high premium on a trainer's ability to perform a task to an extremely high level of proficiency and assume that because he is an expert practitioner of a skill he can train others to be experts in the same skill.

The fallacy of this approach is obvious in the following football analogy. Some say Joe Namath was the best pure passing quarterback football has ever seen. If it is true that great practitioners also make great coaches, then Joe Namath should also make a great quarterback coach. But most who have observed Namath over the years doubt that he has that ability.

Obviously, the corollary to this analogy is that there have been some effective quarterback coaches who were not necessarily great practitioners of the art as players. A great coach has to use a different approach from that of a great practitioner.

What the Army must do is to identify tasks that trainers have to be able to perform and then train them in those tasks; certify that they are capable of performing those tasks to standard; and ensure that they are also proficient in performing the same tasks they expect those they are training to perform.

As a point of clarification, it should be clearly understood that it is important for a trainer to be able to perform a soldier's task to high standards. Given a choice, however, as to where the most effort should be expended in developing skills, the choice should be trainer competencies rather than soldier skills.

For example, if effective individual training is an important goal, the Army must develop trainer tasks, conditions, and standards and then train its trainers to those standards. This concept is based on the notion that the tasks a trainer has to perform are different and distinct from the tasks the soldiers they train are required to perform. Thus, a soldier during the initial stages of basic rifle marksmanship training is taught to apply the four fundamentals of marksmanship—aiming, breathing, trigger squeeze, and body position. The soldier's trainer should be expected to apply each of those fundamentals to the required standard, although being able to do those tasks correctly does not in itself make him a good trainer.

COROLLARY TASK

Accordingly, a corollary trainer task might read: Train soldiers to apply the four fundamentals of rifle marksmanship. This should be taken to mean that to train a soldier in that task, the trainer must be able to instruct the four fundamentals of rifle marksmanship; identify soldiers who are having difficulty or problems in applying the fundamentals; analyze their problems and determine what is causing them to fail to achieve the standard; and, after he has diagnosed those problems, correct the soldiers so that they can reach the standard. The essence of a trainer task, therefore, is to be able to instruct, identify, analyze, and correct. (An example of a trainer task, condition, and standard for applying the marksmanship fundamentals is shown in Figure 1.)

Frequently, trainers also must use training devices and must therefore be trained and certified in using them. A trainer who is training soldiers in using the Dragon medium antiarmor weapon system, for instance, must be proficient in the use of the Dragon launch effects simulator (LES) and launch effects trainer (LET). He must know how to set up both devices and put them into operation, how to use the entire system to evaluate student performance, and how to maintain the system. He must also know how to set up such ancillary devices as the tracking board and instruct those who are going to assist him in using the system. Furthermore, he must know all of the safety aspects associated with using a training device. Consequently, one of the trainer tasks associated with the LET would read: Prepare the monitoring set for operation with the launch effects trainer. (An example of the specific condition and standards associated with this trainer task is at Figure 2.)

The proposition that training trainers in trainer tasks will result in better trainers raises the question, In what tasks do trainers need to be trained? Clearly, an argument could

BASIC RIFLE MARKSMANSHIP TRAINER TASK	
TASK	Train soldiers in the application of the four fundamentals of BRM.
CONDITION	Given a suitable training area with the target-box exercise equipment and devices, individual fighting position, equipment for dime-washer exercise, the Riddle device, training support package (TSP) and all associated training aids, and four instructors (role playing as students/trainees) each with M16 rifle, helmet, and LCE.
STANDARD	<p>The candidate instructor will:</p> <ol style="list-style-type: none"> 1. Present the safety briefing in accordance with the TSP. 2. Present the introductory instruction on the four fundamentals of basic rifle marksmanship using an assistant instructor, all training aids required in the TSP and in accordance with instructor training course standards and the TSP. 3. Identify, analyze, and correct the body position of each student/trainee in the prone unsupported and foxhole supported positions. (NOTE: One soldier will be in the correct position; the certifying instructor will have the other three trainees use common body position errors.) 4. Identify, analyze, and correct students who fail to apply the four fundamentals of BRM during the target-box exercise. 5. Identify, analyze, and correct all students for breathing, trigger squeeze, and body position errors during the dime-washer exercise. 6. Identify, analyze, and correct peer coaches during all exercises. 7. Correctly mount and use the Riddle device to analyze and correct a soldier with an aiming point problem.

Figure 1

be made that would require the development of trainer tasks as corollaries to all individual tasks, both common and MOS-specific. Too, depending on the number and the complexity of the enabling skills associated with each critical combat task, it could be argued that some if not all enabling skills also require the development of corollary trainer tasks.

Perhaps the simplest test to use in determining the importance of a trainer task is to apply the DIF (Difficulty-Importance-Frequency) model to each Soldier's Manual task and the corollary trainer tasks. This model asks the following fundamental questions:

How difficult is it to perform the task? Applied to trainers, this question could be modified: "How difficult is it to *train* the task?" The measure normally associated with this criterion is the complexity of the task. If it involves a sizable number of performance measures, or if a specific sequence is required in performing it to standard, the task has a high degree of difficulty. Accordingly, task difficulty is generally proportional to the number of performance measures and a required sequence of performance. Thus, the difficulty of training soldiers in the common task of "React to indirect fire," which has only two performance measures, is inherently less difficult than the trainer tasks that call for conducting a Dragon training exercise that has 11 distinct performance measures, each of which must be performed in a proper sequence.

Some tasks are inherently difficult to learn even when they have few associated performance measures. Consider, for example, the task "Estimate range." While there is only one standard and one performance measure for this task, it is a difficult skill to master and train, as evidenced by the high frequency of student failure associated with it. Therefore, difficulty can also be measured by a student's ability to learn the task, regardless of its complexity.

Difficulty in task performance is also an indicator of potential learning decay for the student and the trainer. Simply put, the more difficult the task, the more frequently it must be trained and evaluated to sustain proficiency.

How important is the task in the context of a soldier's mission, job, or survivability? One might expect that if a task is important for a soldier to learn, then it is equally important for a trainer to learn to train that task. Not all tasks are equal in importance, however, even though they appear in Soldier's Manuals and by definition are all critical to a soldier's combat performance. Training a soldier to determine direction using field expedient methods, for instance, is probably not as important as training that same soldier to engage enemy personnel with his assigned weapon. A soldier's ability to accomplish his job, the unit's mission, and his individual survival must dictate the importance of the task.

The final arbiters in selecting individual tasks for training are the senior NCOs in a unit. If a soldier's task is important, then it is axiomatic that training trainers to train that task is also important.

For the trainer, the importance of a task may also be a function of the way a critical combat task is to be trained. For example, since few Dragon gunners get an opportunity to fire a live missile, the use of the LES and LET devices takes on special meaning—using these devices is not only important to effective Dragon training, it is essential.

How frequently is the task expected to be performed in combat? This is also a measure of the task's complexity. A task that calls for giving first aid for frostbite, at best, has only seasonal relevance. It cannot be considered as critical to a soldier as engaging enemy personnel with his individual weapon. Developing trainer tasks for tasks that may be difficult to perform is important, but tasks that are performed infrequently should take a low priority when

DRAGON TRAINER TASK	
TASK	Prepare the monitoring set for operation with the launch effects trainer (LET).
CONDITION	On a suitable range or training site, given one or more monitoring sets and LET devices, LET support stands, and TM 9-6920-484-12.
STANDARD	<ol style="list-style-type: none"> 1. Perform a before-operation check on monitoring set. 2. Position monitoring set at firing site. 3. Open monitoring set. 4. Prepare monitoring set for voltage test. 5. Conduct voltage test and replace faulty sets. 6. Connect the W2 cable assembly to the monitoring set and LET.

Figure 2

compared to those that are performed daily. Similarly, if a critical combat task is complex and requires frequent training, then the trainer task, by necessity, will be performed more frequently.

The development of trainer tasks should therefore be predicated on an analysis of the corollary Soldier's Manual tasks using the DIF model, which relates task criticality to combat and training performance and should be the primary measure for developing trainer tasks. Since training devices are not included in Soldier's Manuals, all of the tasks associated with their preparation, use, and maintenance must also be developed into trainer tasks.

In many cases, though, it is simply not enough to develop a trainer task for its corollary Soldier's Manual task or for using a training device. Some Soldier's Manual tasks require a soldier to learn numerous enabling skills before he can perform the task to standard.

Training soldiers to engage enemy personnel with the M16 rifle is an excellent example of a task that requires preliminary training in enabling skills to specific standards. Thus a soldier must apply the fundamentals of rifle marksmanship, demonstrate the integrated act of shooting, group his shots, acquire targets, estimate range, establish a battlesight zero, engage single and multiple targets, perform immediate action, and others. Each of these enabling skills is a unique task that also requires corollary trainer tasks. Therefore, the critical combat or Soldier's Manual task can be viewed as being a terminal learning objective, while the subordinate tasks or skills that must also be trained are enabling learning objectives.

TRAINER TASKS

Once trainer tasks have been developed—whether as terminal or enabling learning objectives—a basis is established for certifying trainers to specific performance standards. Skills that are essential to learning other skills obviously should be trained first. A trainer certification program that includes specific trainer tasks, conditions, and standards will significantly improve the quality of training and the quality of the Army's training.

But "trainer certification" involves more than performing trainer tasks to standard. It is a term that has been bandied about with little definition in the community of the Training and Doctrine Command for a number of years. Within the context of this article, however, certification is defined as "the act or process used to ensure that a trainer/instructor has fulfilled specified requirements to enable him to act as a subject matter expert or instructor in a designated doctrinal or instructional area." Essentially, certification means that a trainer has demonstrated enough proficiency in his designated subject area to be qualified to train in that area. (A sample process for instructor certification is shown in Figure 3.)

When an instructor-candidate is first assigned to a training organization at an institution, he should be screened to

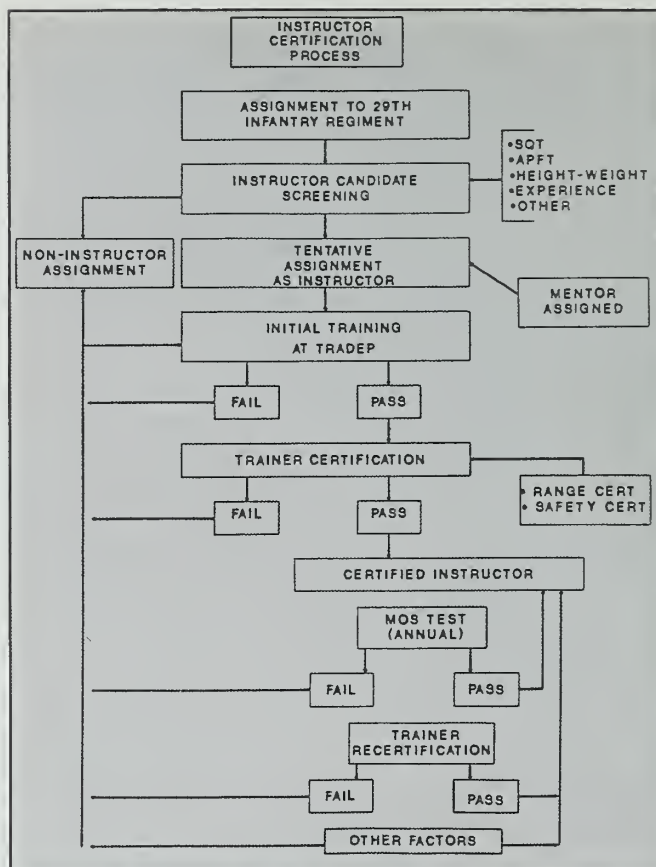


Figure 3

determine whether or not his skill qualification test (SQT) performance, Army Physical Fitness Test results, weight standards, experience, or other factors meet the criteria established for an instructor in the particular area for which he is being considered.

A score of at least 80 on his SQT, the Army qualification standard for promotion to the next higher rank, is desirable for an instructor-candidate. Although it may be necessary in some cases to assign soldiers who have not attained this standard to instructional duties, it should still be a stated objective. If an instructor has not reached the standard at his next testing, however, his removal from instructor status should be considered. (The new NCO self-development tests may call for a modification to this standard.)

If an instructor-candidate meets the appropriate requirements, he should be tentatively assigned as an instructor and sent initially to an instructor training course (ITC) to prepare him in the methods of instruction he will need to become a qualified instructor. Simultaneously, he should be assigned a mentor from his instructional branch. The mentor must be a seasoned, experienced trainer who is capable of providing advice and counsel and of overwatching the individual's preparation for his instructional duties.

If the trainer-candidate fails this course, he should either be enrolled for a second attempt or assigned to non-instructor duties. If he passes the ITC, he should begin trainer certification, which may include up to three components:



safety certification, range operation certification, and trainer proficiency certification.

Safety qualification, which may include both written and hands-on sub-components, should be administered by the designated unit assistant safety officer. If the trainer is to instruct on a range, he must pass a range division training program and be certified as a range instructor. Finally, he must pass his trainer proficiency certification within his own committee or instructional branch.

Trainer proficiency certification itself has three sub-components: a written component to test the trainer's knowledge in his particular subject area; a student component to test the instructor-candidate's ability to perform the tasks he will be called on to teach soldiers; and finally, a trainer component to test his ability to perform trainer tasks to the stated standards.

It is essential that all trainers undergo periodic recertification to ensure that they continue to be proficient in their subject area. Annual skill qualification test (SQT) or self-development test (SDT) scores should be used to

determine their competency to continue as instructors.

If this concept of trainer tasks is adopted, then we must determine how we can provide information concerning training tasks, conditions, and standards in our training literature. There appear to be three possible alternatives:

Our Soldier's Manuals could be expanded to incorporate the trainer tasks that are corollaries to the combat critical tasks already in the manual at each skill level. Unfortunately, since those manuals include only the critical combat tasks, they could incorporate only the corollary critical trainer tasks. In addition, most Soldier's Manuals are already voluminous and including these trainer tasks would only magnify that problem.

It is also apparent that trainers would have to be trained in the tasks, conditions, and standards that have been established for many of the enabling learning objectives that are sub-components of the critical trainer tasks. Consequently, the Soldier's Manuals are probably not appropriate for documenting trainer tasks, conditions, and standards.

Separate trainer's manuals distinct from their Soldier's

Manual counterparts could be developed, but this would further increase the amount of doctrinal literature that already burdens the field.

Finally, trainer tasks, conditions, and standards could be incorporated and added to existing training circulars, field manuals, and technical manuals that relate to specific items of equipment and weapon systems. The trainer tasks, conditions, and standards for the M16A1 and A2 rifles, for instance, could be added to Field Manual 23-9.

Of the three options, the last seems to have the most merit. Since we tend to concentrate our individual training on specific items of equipment or weapons, adding the trainer tasks, conditions, and standards related to a piece of equipment or weapon to these manuals may be the most expedient and effective approach to documenting trainer tasks in our literature.

Perhaps the most important issue to be resolved is the question of where to train trainer tasks, conditions, and standards and where to certify trainers. Clearly, institutional organizations must establish their own trainer certification programs before allowing trainers to train.

The issue of the certification of trainers in a unit is more complex and more difficult to solve. These trainers have a multitude of training requirements that inhibit their specialization in any particular area. It is probably unrealistic to expect that specific train-the-trainer programs can be established and executed to standard in a unit. Ideally, trainers should arrive in a unit already certified to train on the tasks associated with their MOSs and skill levels.

For noncommissioned officers, the Noncommissioned Officer Education System (NCOES) must be the vehicle for certification. Graduates of the Primary Leadership Development Course (PLDC), for example, should be certified to train Skill Level 1 common tasks; graduates of the Basic NCO Course (BNCOC) must be certified to train soldiers in the specific Skill Level 1 and 2 tasks associated with their MOSs; and graduates of the Advanced NCO Course (ANCOC) must be certified to train Skill Level 3 tasks in their MOSs.

While some effort has been made to ensure that courses within the NCOES focus on how to train, none has provided enough time within its existing program of instruction to add extensive train-the-trainer certification requirements such as those outlined in this article. In fact, the full implementation of this concept may be unrealistic and

unattainable. Consequently, it might be necessary to list in an order of importance the critical trainer tasks that demand certification at a training institution before a leader-trainer returns to a unit. Using this approach, some trainer tasks will be certified in the institution while others, usually of lesser importance, will be certified in the unit.

Further, the tasks that are certified at the institution will also require some degree of recertification at the unit. In any event, the current NCOES focus on how to fight must now be balanced with an increased emphasis and focus on how to *train* to fight.

If we must revise our approach to NCOES in regard to training NCO trainers, we must also review our approach to training officers. The initial effort of an officer train-the-trainer program must be made by the officer accession programs—Officer Candidate School (OCS), the Reserve Officer Training Corps (ROTC), and the United States Military Academy (USMA). But the predominant emphasis in certifying officer trainers will be in the branch officer basic courses. The trainer tasks selected for the institutional certification of officers in their respective branch courses should be the same tasks selected for certification in the basic and advanced noncommissioned officer courses.

Training the trainer in both officer and NCO development courses will require a total rethinking of the way we have done business in the past. Both will require more hours for the training of critical trainer tasks. We must take a hard look at those areas in our current courses where other instruction can be modified or eliminated. If we expect to improve the quality of our training and of the performance of our soldiers at the training institutions, and the Army at large, we must set priorities and re-allocate time for training our trainers.

Training the trainer using trainer tasks, conditions, and standards is a logical follow-on to the identification of critical combat tasks and represents a corollary approach. Both are important. Both require a separate analytical approach, and both require a concerted effort and expenditure of resources to achieve quality and excellence in training.

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Captain James L. Boling

Tactical Unit Rehearsals

The battlefield of tomorrow will be a terrifying and bewildering environment where we will be opposed by a tough, determined, and resourceful enemy. The lethal, fast-paced, and continuous nature of combat in such an environment will tax to the utmost our leadership and command and control. To succeed there, units will have to execute highly decentralized operations with precision, speed, and certainty. This kind of execution will demand that every leader and every soldier understand the concept of the operation and where he and his unit fit into it. This

level of understanding can be achieved through effective rehearsals of tactical unit operations.

It has been shown that units training at the National Training Center (NTC) can improve their performance by conducting well-planned, well-executed multi-echeloned combined arms rehearsals. Yet most units do not appear to have much experience with rehearsal techniques. Some do not even attempt to rehearse, and some rehearse so poorly that their efforts only bewilder the participants.

If good rehearsals do lead to unit success, the techniques

and procedures of rehearsal planning and execution deserve our attention, and the time spent in mastering rehearsal skills will be well spent.

Rehearsing key combat actions allows soldiers to become familiar with an operation and to translate the relatively dry recitation of a tactical plan into visual impressions. These visual impressions then help the soldiers orient themselves to their environment and also to the other units during the operation.

Moreover, the repetition of combat tasks during a rehearsal leaves a lasting mental picture of the sequence of the key actions of the operation. Rehearsals also provide a forum through which subordinate units and leaders can "proof" the tactical plan, before it is too late, to ascertain its feasibility and the adequacy of its command control measures.

Rehearsals do take time, and time is probably the most precious resource a commander has. The amount of time a rehearsal requires varies with the complexity of the task to be rehearsed, the type of rehearsal, and the level of participation. For this reason, rehearsals should be conducted at the lowest possible level using the most thorough technique the available time allows.

CLASSIFICATION

Rehearsals can be classified in two ways—by the technique used and by who participates. Following one convention, techniques are identified with numbers (Levels I-III) and participation with letters (Types A-D). Any combination of number and letter codes can be used to tell subordinates which type of rehearsal will be conducted and who will attend. The techniques, then, starting at the top, are described as follows:

- Level III rehearsals are full-scale dress rehearsals that involve the use of real-time mounted and dismounted maneuver operations over the actual, or similar, terrain. These rehearsals obviously require the most resources and may remove key leaders from their units for extended periods. Level III rehearsals are desirable, but rarely feasible, at brigade or battalion level.

- Level II rehearsals are scaled down operations that use selected personnel (usually key leaders) mounted in wheeled or tracked vehicles to maneuver over terrain that is similar to the actual terrain over which the unit will operate. Level II rehearsals cover smaller areas, require fewer resources than Level III rehearsals, are possible at all levels of command, but may not cover the entire planned operation. They may focus instead on just a few key actions such as a hasty river crossing or link-up operation. A recommended scale is 100 meters equals one kilometer.

- Level I rehearsals are conducted on a very small scale and do not involve mounted or dismounted maneuver. Examples include map wargaming, sandtable talk-throughs, and local area, scale model walk-throughs. Level I rehearsals may cover an entire planned operation or may concentrate

only on key actions. (A walk-through scale of two meters equals one kilometer is recommended.) Level I walk-throughs of an entire operation often follow Level II or III rehearsals of critical actions by subordinate units. Level I rehearsals are the norm at brigade level, while subordinate battalions and companies execute more detailed rehearsals.

Personnel participation is closely linked to the levels of rehearsals. The following listing is for the four types of personnel participation at battalion level. Obviously, not all of these people are assigned at brigade or company level. (The accompanying matrix shows the combinations of personnel participation at each level of command.)

- Type A participation includes the commander, S-3, fire support officer (FSO), air liaison officer (ALO), executive officer (XO), primary staff, battalion motor officer (BMO), subordinate commanders with their FSOs, specialty platoon leaders, and combat support (CS) unit commanders. Type A rehearsals are not usually conducted at brigade level because the group is too large for anything other than Level III rehearsals.

- Type B includes the commander, XO, S-3, FSO, ALO, subordinate commanders with FSOs, mortar and scout platoon leaders, and CS unit commanders.

- Type C includes the commander, S-3, FSO, ALO, subordinate commanders, mortar and scout platoon leaders, and CS unit commanders, as required by the mission. (If, for example, the mission involves a deliberate breach of a complex obstacle, the engineer unit commander would be present, but the air defense artillery unit commander might not.)

- Type D includes the commander, S-3, FSO, ALO, and subordinate commanders.

PARTICIPATION

Certain degrees of participation are more appropriate to certain rehearsal levels than others. For instance, Type B and C participation is most appropriate for Level I rehearsals, while Type A participation is most commonly associated with Level III rehearsals.

Participation should be closely matched to the rehearsal level to gain the most benefit from a rehearsal. Too many idle people watching instead of participating, or the absence of certain key personnel, detracts from the quality and the benefit of the rehearsal.

Portions of the planned operation may be rehearsed in more detail with more players while other portions may be less involved. This information may be included in the "coordinating instructions" portion of the operations order (OPORD) or briefed orally at the conclusion of the orders briefing.

The order might specify, for example, "River crossing rehearsal II-B at 1245 hours, vicinity tactical operations center (TOC). Entire operation rehearsal I-C walk-through, at 1330, vicinity EF 45332345." Note that the more general rehearsal comes after the more specific rehearsal and

REHEARSAL TYPES

	TYPE A	TYPE B	TYPE C	TYPE D
COMMANDER	----- ALL COMMANDS -----			
XO	----- ALL CMD'S -----			
S3	----- BRIGADE AND BATTALION -----			
FSO/FIST	----- ALL COMMANDS -----			
ALO	----- BRIGADE AND BATTALION -----			
SUB-UNIT CDR'S	----- ALL COMMANDS -----			
PRIMARY STAFF	BDE, BN			
SPECIAL STAFF	BDE, BN			
SCOUT PLT LDR		BN		
MORTAR PLT LDR		BN		
SPT PLT LDR	BN			
CBT SPT UNIT CDR' s	----- ALL CMD'S -----	AS REQ'D		

subsequent fine tuning of the river crossing, the critical action. This assigns the river crossing itself priority in the event time runs out, and it allows for the inclusion of whatever changes may need to be made as a result of the river crossing rehearsal.

Although this technique can be used at any level from company to brigade, it is generally not used at company level because of the small number of participants. Instead, a company commander simply tells his subordinates who should be there, when, and with what equipment to do what tasks.

Although most of the rehearsals that maneuver units plan and conduct are rehearsals of combat actions by subordinate maneuver units, rehearsals of special tasks or special functional groups are sometimes desirable. These might include command group, TOC shift, decontamination, reconnaissance and security (R&S) plan, and engineer reserve demolition target turn-over rehearsals. The decision concerning which special rehearsals to conduct, if any, is the commander's. Special rehearsals can be as formal or informal as the need dictates and the time allows.

Special rehearsals do not fit neatly into the type and level classifications outlined above. How extensive a rehearsal should be and who should participate depend on the time available, the complexity of the tasks, and the unit's level of training. A TOC shift rehearsal, for example, is often nothing more than a talk-through of key information and

the actions likely to be taken by the TOC, set against the framework of the S-2's decision support template. When a certain unit must cross a known contaminated area, decontamination may be a Level III, Type A rehearsal on the actual terrain. And the battalion S-2 may conduct a Level II, Type D rehearsal of the patrolling portion of the battalion R&S plan with the scout platoon.

Rehearsal planning consists primarily of deciding what, how, who, and when. Ideally, the entire operation is rehearsed from start to finish, but this is seldom possible, nor is it necessary when the units are reasonably competent in most of their battle tasks. Instead, rehearsals usually focus on selected critical tasks that are deemed necessary to the accomplishment of the mission.

A good starting point from which to select the tasks to be rehearsed is with the critical tasks identified by the S-3 or the commander during his troop leading procedures. Obviously, tasks that are either vital to the mission, especially complex, or totally unfamiliar to the troops would receive top priority. If the priority list of tasks becomes too long, the commander or S-3 may subjectively eliminate certain lower priority tasks from further consideration. This subjective determination is based primarily on the time available for rehearsals.

As an example, a battalion task force is scheduled to conduct a movement from an assembly area, a forward passage of lines, and a deliberate attack against a dug-in

motorized rifle company (MRC). The battalion commander and S-3 may identify as critical the passage of lines, the breach of the initial obstacle belt, the defeat of the combat security outpost, the capture of the enemy position, and the defeat of the motorized rifle regiment's (MRR's) counterattack. Although each of these should be rehearsed, the commander must weigh the tasks on the basis of the time available (say eight hours); the training status of the subordinate units (uniformly good, but they haven't breached an obstacle in two years); the commander's intent (the battalion absolutely has to be in position to defeat the MRR counterattack); and the complexity of the task (forward passage of lines at night through an allied unit with no clear obstacle plan and guides who cannot speak English). In this example, then, he might assign first priority to the passage of lines, second to the obstacle breach, and third to the defeat of the counterattack. Then, if time remains, he might choose to rehearse other tasks as well.

Although only a few tactical events are actually rehearsed, these rehearsals are generally followed by a Level I rehearsal of the entire operation. This allows participants in the other single-task rehearsals to rehearse in the context of the operation as a whole.

Each level of rehearsal has an associated cost in terms of time and resources, with time being by far the greatest consideration, not only for the rehearsal itself but also for its preparation and multiple iterations. Rehearsing to proficiency in given tasks requires several runs. When the time for these is added to the time required for an AAR after each run and possible adjustments to the plan, rehearsing even the most straightforward combat tasks requires a great deal of time and resources.

REHEARSAL TERRAIN

Depending on the level of rehearsal to be conducted, time must be allocated for preparation. A good rule of thumb is to conduct rehearsals along the lines of the one-third/two-thirds rule, scheduling them to be conducted after subordinate units have used one-third of *their* time. In sequencing rehearsals, commanders must consider the crawl-walk-run approach and the "nesting" of simultaneous complementary tasks.

In the crawl-walk-run approach, units conduct less intense, smaller scale, or "half-speed" rehearsals in preparation for subsequent iterations that are closer to full dress rehearsals. Similarly, units may execute Level III (run) rehearsals of small-unit tasks in preparation for a Level I (walk) rehearsal conducted by their higher headquarters.

The "nesting" of simultaneous complementary tasks involves breaking down a highly complex task into sub-tasks that are rehearsed separately, then combined into a later rehearsal of the entire complex task. For example, if a unit with engineer support is to execute a deliberate breach of a complex obstacle, the "nesting" might have the maneuver unit conduct a Level II rehearsal of its assault force and

support forces while the engineer unit does the same for its breaching force. Later, these three forces might conduct a Level III rehearsal of the entire breaching operation.

These various rehearsals must be synchronized. Too, rehearsal requirements at different levels of command must not be so numerous or so closely spaced that the subordinate units are not given time for their own rehearsals or that the commanders need to be in two places at the same time. The time required to move between rehearsal sites and available daylight hours must also be considered.

A commander's decisions concerning rehearsals are either included in the OPORD, briefed at its conclusion, or included in a warning order. An extremely detailed and complex rehearsal scheme, such as a Level III-A rehearsal at night, may require a separate annex to the OPORD.

Regardless of which method or level of rehearsal is to be conducted, a single person or staff section must be made responsible for the manual preparation of the site and for the supporting overlay and other materials. Typically, the S-3 section at battalion or brigade level has this responsibility, and at company level, the commander or the XO.

Preparing for Level II and Level III rehearsals consists of selecting a suitable piece of terrain, preparing overlays, and providing for necessary combat service support (CSS).

LEVEL OF REHEARSAL

The terrain for a rehearsal is selected on the basis of a map and ground reconnaissance. The terrain must match as closely as possible the actual terrain in the area of operation. Key elements of similarity should include vegetation, visibility, and prominent terrain features. In addition, the terrain must be available for the unit to use. If it is outside the unit's area of operations, coordination will be required. Unfortunately, the use of the same full-scale piece of terrain as the actual operation is possible only for defensive and retrograde operations.

Terrain management is a significant handicap to large-scale, realistic rehearsals, especially in a combat environment. The density of units on the battlefield makes finding adequate pieces of terrain for Level III rehearsals almost impossible for offensive operations. Obviously, the larger the unit rehearsing and the larger the scale of the rehearsal, the more difficult it is to find and use suitable terrain.

Once a suitable piece of terrain is selected, it may still need some modification to portray the actual terrain more accurately. A shallow cut with an engineer dozer blade, for example, can simulate a river, or a pile of empty ammunition crates a town. Some crates with a tarp thrown over them can represent a hill, and camouflage nets can simulate forests.

The difficulty of these additions to the existing terrain will be influenced by the scale selected for the rehearsal. The smaller the scale, the easier the adjustments. The selection of terrain features to portray or highlight may be influenced by the visibility conditions that will be present during the operation itself. If, for example, the operation



will take place at night, highly visible, close-in terrain features should be represented instead of more prominent but distant features that will not be visible.

The overlays needed for a rehearsal are aligned with a 1:50,000 map but show scaled-down graphic control measures for use during the rehearsal. Scaled overlays also indicate the rehearsal identity of certain key terrain features. For example, a rehearsal overlay may identify a highway on the map as a river.

To execute full-scale Level III rehearsals correctly, a unit must have combat service support and must plan extensively for its use. In many ways, the depth and detail of this planning and coordination will mirror that of the unit's peacetime field training exercises. Depending on the size of the unit rehearsing and the proximity of the rehearsal terrain, units may need to plan and execute tactical roadmarches to move to the rehearsal site. Food, water, pyrotechnic devices, and medical support for the participants must be coordinated. Illumination devices or "chemlights" may be required for night rehearsals, and the headquarters conducting the rehearsal routinely provides these items and coordinates their use as necessary. If the participants must supply a certain item on their own, this will be highlighted in the briefing or annex that explains the rehearsal.

Except for map or terrain sketch talk-throughs, Level I rehearsals generally require as much preparation time as Level II or III rehearsals, because field expedient materials

and training aids are usually required to build a reasonable facsimile of the area of operations on what is really a small piece of fairly uniform terrain.

Almost anything can be used to build the terrain model—rocks, brush, empty cans, crates, and the like. Operational graphics can be overlaid on the model using engineer tape, branches, or lumber. Walk-throughs may be accompanied by painted, color-coded five-gallon cans to represent other units, both friendly and enemy.

Given enough time before deployment, units can assemble sand-table kits containing various materials for building small-scale terrain models. These kits may include armored vehicle identification kit models from training support centers or commercially available replicas. Narrow engineer tape, various sizes and shapes of wooden blocks, spray paint, and sandbags may also be included. Sandbags can be crumpled to simulate vegetation or filled with dirt and rocks to portray terrain features. This kit is typically carried in the TOC where one soldier maintains it and is responsible for the construction of the terrain model. At company level it can be carried in the combat trains or a less elaborate version in the commander's vehicle. (In the absence of a kit, the steel side skirts of an M1 tank or a Bradley fighting vehicle can be used with colored chalk drawings of terrain features and small-scale vehicle models or unit symbols glued to magnets.)

Once the personnel specified in the rehearsal instructions

are assembled at the rehearsal site, the commander or S-3 briefs the participants and then leads the rehearsal. This briefing includes an introduction, an overview, and an orientation.

After the rehearsal leader introduces himself and all the other key participants, he briefs the participants on his briefing topics, what is going to be rehearsed, and in what sequence. He briefs a general time line and a fixed not-later-than ending time. He explains when and how the after action reviews will be conducted, who will conduct them, and how any changes will be incorporated into the existing plan. He explains in detail any restrictions such as the use of pyrotechnics, light discipline, weapon firing, or radio transmissions. He ensures that all participants understand whatever safety precautions are in force.

Finally, he emphasizes what results are expected from the rehearsal and what standards of task execution are to be achieved. He gives subordinate leaders an opportunity to share the results of whatever tactical planning or rehearsals they may already have conducted. If a subordinate unit at this time recommends a change to the existing plan, the commander or S-3 acts on the recommendation before beginning the rehearsal.

During the orientation portion, the rehearsal leader orients the participants to the terrain or scale model being used, making sure the scaled overlays are distributed if this is appropriate. He identifies north on the terrain model or the scaled terrain and points out which objects and terrain features represent which actual terrain features. For example, he may say, "The large tarp-covered pile of crates at two o'clock at about 75 meters represents Hill 624. The red five-gallon cans near the military crest simulate the three motorized rifle platoon positions located there."

He explains any graphic control symbols, obstacles, or fire support targets that are represented. For example, "The 7.62 ammunition cans with the white crosses represent the coordination points between units. The 120mm tank gun round bases represent the ground-emplaced minefields. The crosses of engineer tape spraypainted red are artillery and mortar targets." He always concludes the orientation with a call for questions.

After this briefing, the rehearsal begins in accordance

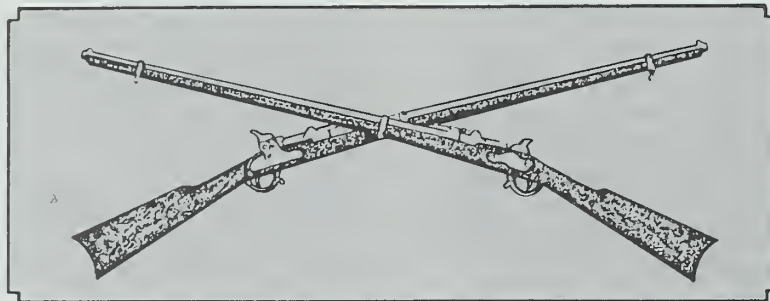
with the plan that has been briefed. The commander or the S-3 observes and critiques all portions of the rehearsal, with the critiques centering on meeting the commander's intent and coordination between units. The execution of tasks within the rehearsal is almost always left to the judgment and discretion of the subordinate unit commander. Leaders at all levels conduct periodic AARs to ensure that tasks are rehearsed to the acceptable levels of competence and that a substandard performance is not reinforced. These AARs also provide an opportunity to incorporate lessons learned into the existing plan or into subsequent rehearsals.

The rehearsal leader must emphasize the integration of fire support, events that trigger different contingency actions, and actions on contact. If units in reserve are rehearsed, those units should rehearse all of their most likely contingencies. The rehearsals continue until the units are competent or until the time available has expired. (The commander can extend the allocated time but should refrain from curtailing it.) Succeeding iterations of the rehearsal may include more complex tasks and added realism as the commander sees fit.

At the conclusion of the rehearsal, the commander reassembles the participants to review the lessons learned and any modifications to the existing plan. In this meeting, the commander can also issue any last-minute instructions or reminders and reiterate his intent for the operation. Any changes made to the existing plan are then incorporated into the orders and plans of the subordinate units. Such changes are also briefed to any key leader or unit that did not participate in the rehearsal.

Since it has been shown that adequate rehearsals do, in fact, lead to successful training, the techniques and procedures of planning and executing rehearsals deserve our attention. Effective rehearsals are clearly a prelude to tactical success on tomorrow's battlefield.

Captain James L. Boling recently completed an assignment with the Advanced Tactics and Doctrine Branch of the U.S. Army Armor School and is now assigned to the Combat Maneuver Training Center at Hohenfels, Germany. His previous assignments include tank company command, battalion S-3 Air, and small group instructor at the Armor School. He holds a master's degree from the University of Louisville.





Lieutenant Colonel Michael A. Thompson

Light Infantry In Stay-Behind Operations

The usefulness of light infantry on the battlefield stems from its inherent flexibility, its offensive orientation, its mastery of night operations, and its ability to dominate restrictive terrain. One role on the battlefield requires just such characteristics, that of a stay-behind force.

During Exercise TEAM SPIRIT 90, a combined U.S.-Republic of Korea (ROK) field training exercise held annually in Korea, one battalion of the 25th Infantry Division had a unique opportunity to conduct a stay-behind operation under simulated combat conditions. The planning, preparation, and execution of the operation, and the lessons learned from the experience may prove helpful to other light units and to the Army as a whole.

TEAM SPIRIT is substantially free-play, decidedly fast-paced, and controlled by an extensive umpire-controller organization that reaches down to company level. The 1990 exercise involved two field armies—Field Army Blue and Field Army Orange, both consisting of U.S. and ROK forces. These armies went at each other for 12 days using about all of the conventional assets of both countries.

Field Army Blue—composed of a notional Field Army Blue North, a Field Army Blue Central, and a notional Field Army Blue South—was initially on the defensive. Field Army Orange—consisting of a notional Field Army Orange North, a Field Army Orange Central, and a notional Field Army Orange South—took the offensive on D-Day after

a two-day reconnaissance battle between the two armies.

Narrowing the focus on the Blue forces, FABC was organized with I Corps (ROK) on the north and I Corps (U.S.) on the south. The 25th Infantry Division, assigned to the U.S. I Corps, deployed to Korea with its 3d Brigade (with the brigade base and one of its infantry battalions); the 29th Separate Infantry Brigade, Hawaii Army National Guard (with the brigade base and one of its infantry battalions); and a substantial portion of the division's support units. Once in Korea, two ROK infantry battalions joined each of the two brigades.

Opposing the U.S. I Corps was the ROK VII Corps. Opposing the 25th Division's units were elements of the 2d U.S. Infantry Division, the 1st ROK Marine Division, the 66th ROK Mobilization Reserve Division, and the 2d ROK Armored Brigade (Figure 1).

(As mentioned above, the Blue forces started the exercise in a defensive posture and continued their defensive operations until D+4. At this time the Blue forces went over to the offensive, and continued offensive operations until the end of the exercise. This prearranged allocation of the available exercise days is traditional for the TEAM SPIRIT exercises.)

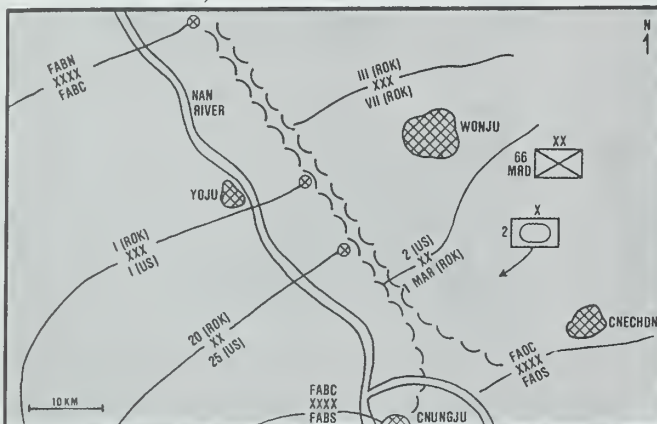


Figure 1

A detailed intelligence preparation of the battlefield (IPB) during the defensive phase of the exercise revealed that the array of Orange forces along the division front outnumbered the Blue forces by about 4:1. The 25th Division was therefore compelled to look for a concept of operation and a scheme of maneuver that could respond to the threat and give the division a reasonable chance of succeeding. It was the search for just such a scheme of maneuver, along with considerations of METT-T (mission, enemy, terrain, troops, and time), that led the division commander to use a stay-behind force.

The division commander wanted the stay-behind force to act boldly and aggressively to disrupt and confuse the Orange force elements that were positioned behind the Orange assault echelon. He believed that the high-risk, high-payoff nature of the stay-behind force might be a good way to counterbalance the unfavorable combat ratios he faced, and that it might provide a catalyst for a division advance once it went over to the offensive.

Defending with the division's two brigades forward (the 29th Brigade in the north and the 3d Brigade in the south)

the division commander directed the commander of the 3d Brigade to position a stay-behind force in a hide position (AO Wolf) to the rear of the U.S. I Corps covering force but well forward of the expected main battle area (Figure 2). The brigade commander selected his own light infantry battalion—the 4th Battalion, 27th Infantry—for the stay-behind mission and planned to use his two ROK battalions to anchor the main defense in his assigned sector.

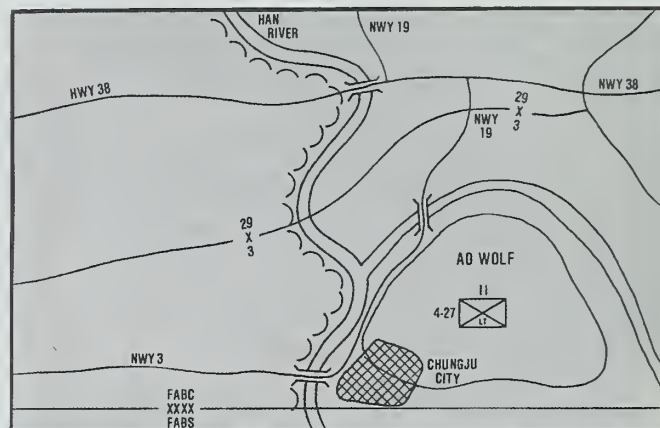


Figure 2

It was during a division-wide command post exercise (CPX) in Hawaii that the division commander's concept and the 3d Brigade commander's implementing instructions were first tested, albeit on a map board. The results solidified the commanders' conclusions that a stay-behind mission stood a reasonable chance of succeeding and that the potential gains were worth the risk involved in it.

The battalion itself used the same CPX as an opportunity to brainstorm the requirements and considerations necessary to conduct such a mission. Since the maps used for the CPX were of the same ground that would be used during TEAM SPIRIT, the battalion was also able to conduct a detailed map study.

Following the CPX, the commanders of the 3d Brigade and the 4th Battalion and their staffs held several sessions in which they discussed with their key leaders down to platoon level the challenges inherent in a stay-behind operation. Representatives from the supporting units of the combined arms team also attended these sessions and provided expert advice on technical matters.

From this initial planning, the brigade and the battalion reached several broad conclusions:

- The battalion's ability to hide and remain undetected would be vital to the success of the operation; if discovered, it would soon be rendered ineffective.
- Detection would most likely be from the air or through the interception of communication signals, and extraordinary defensive security measures would be needed in these areas.
- The dispersion of the battalion was important to preventing detection, but this dispersion would need to be balanced against the requirement to assemble the force rapidly for offensive strikes if and when enemy targets presented themselves.

- Logistical planning and preparation would have to be detailed and well understood by all members of the stay-behind force.

During the weeks after the CPX and before its deployment to Korea, the battalion trained on several specific tasks that would help the unit accomplish its mission—the construction of hide positions, individual and unit camouflage techniques, infiltration attacks, raids, link-up operations, river crossing operations using RB-15 assault boats, night aerial resupply, field expedient and directional antennas, and automatic remote keying for KY-57 secure communications equipment.

In preparing its operational concept when it arrived in Korea, the battalion divided the assigned area of operations (AO Wolf) into company AOs and selected locations for other elements on the basis of a map study (Figure 3). The

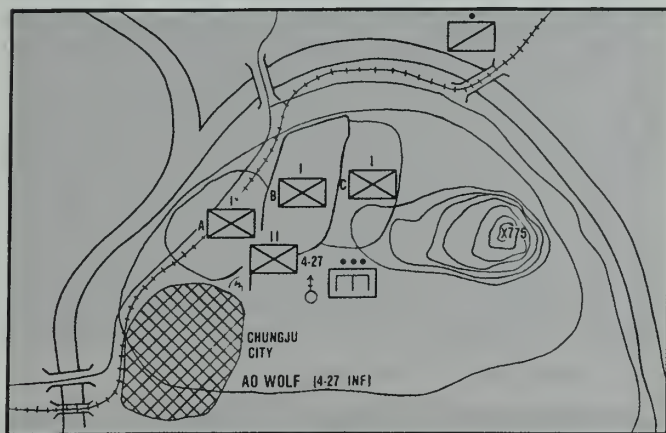


Figure 3

companies could position their forces anywhere within their assigned AOs and were given areas in which to conduct reconnaissance and counter-reconnaissance security operations. Most of the offensive strikes were expected to be conducted at platoon level, with a few at company level.

The battalion would have a light engineer platoon (equipped with RB-15s), a ground surveillance radar (GSR) section, a U.S. Air Force air liaison officer (ALO), and its habitual light infantry fire support element (FSE) and company fire support teams (FISTs). The battalion's antitank TOW platoon would be detached and attached to one of the brigade's other battalions to thicken the main battle defenses.

Operations in the enemy rear were expected to be decentralized down to platoon level. The battalion commander established attack criteria (or a set of rules) to guide every small unit commander concerning appropriate targets, timing, and circumstances of an attack, and prevent the disclosure of a sizable force in the enemy rear.

In a contingency annex, the battalion commander provided detailed guidance as to the actions to be taken in the event of an early detection of all or part of the force, and this guidance was disseminated to every soldier.

To prevent premature detection through the communication signatures of friendly forces, FM radio silence would be maintained in the hide position, except for a report once

a day at a scheduled time. Wire would be laid between positions and command posts, but runners would be the principal means of communication within the hide position. Communications with the 3d Brigade headquarters would be maintained through a single channel TACSAT (tactical satellite) radio. The battalion CP would also passively monitor the brigade's FM nets to track the battle and receive prearranged burst messages. Once offensive operations began, the battalion's units using FM communications would use low power settings and directional antennas.

A careful study of the assigned AO revealed that less than one-fourth of the area could be used for positions that provided protection from aerial detection. All hide positions, therefore, were located in that area. In addition, all positions were to be dug-in with extensive overhead concealment to blend in with the surroundings. The 4th Battalion also planned to use any abandoned buildings in the area. All movement (vehicle and foot) would be limited to the hours of darkness. Friendly overflights would check the effectiveness of the camouflage.

SUPPLY CACHES

The battalion put considerable effort into deciding upon the composition and positioning of supply caches to sustain the force and to use in conducting offensive operations. Some obvious items to be cached were Class I (MREs only), water (in cans, blivets, and 400-gallon trailers), Class III (diesel fuel in five-gallon cans and package items), a small amount of Class IV, Class V, Class VIII, some Class IX, batteries, and other selected items.

Water posed a real challenge because the local sources were not considered safe; whatever was to be used had to be located at a cache site under friendly control. The RB-15s would also be cached to provide a means of crossing the Han River when and if they were needed. Caches would be positioned within the hide positions, elsewhere within the AO, and even beyond the AO to provide redundancy and to support future operations. All caches were to be manned and guarded.

For medical care, the battalion planned to set up the entire battalion aid station in an abandoned building within AO Wolf. All available medical supplies would be needed within the hide positions, because the battalion would try to evacuate only the soldiers with the gravest medical needs; all others would be treated by the battalion physician's assistant and a specially detailed medical doctor. Any necessary medical evacuation would be done at night by a single helicopter. Medical personnel cached Class VIII supplies in larger than normal quantities.

When the soldiers made their initial move by truck to AO Wolf, they would be overloaded with all types of equipment and supplies. They would drop most of the equipment in a central cache area as soon as they arrived in the AO, or stockpile it themselves in their own positions.

Once in AO Wolf, the soldiers would reconfigure their

fighting loads and prepare for combat. Only ten of the unit's vehicles would be located within the hide area to provide limited carrying capability. (If civilian vehicles had been available, they would have been used instead to reduce the possibility of discovery.)

The elements of the battalion that would not be located in AO Wolf (mostly the rest of the vehicles and drivers and the trains personnel) would be positioned in an assembly area to the rear of the expected main battle area. A key role for these elements would be to simulate the battalion's normal radio traffic in an attempt to convince the opposing forces that the entire battalion was occupying the assembly area. In addition, the actual location of AO Wolf was reflected on only a few overlays within the division.

EXERCISE BEGINS

D-Day for the exercise was set. The advance party of the 4th Battalion, 27th Infantry, left its designated base camp on the night of D-3 and completed its movement to AO Wolf in time to position water trailers and establish cache sites and wire communications before daylight. During daylight hours, the advance party stopped all activity.

During the night of D-2, the main body of the battalion made the four-hour truck movement to the AO. The work of the advance party streamlined the occupation of positions. Individual fighting and hide positions were dug, and caches were dug in. Meanwhile, the advance party shifted some of its effort during the evening to digging in, manning, and establishing communications with the cache sites beyond the limits of AO Wolf.

The scout platoon was positioned beyond AO Wolf in an area that allowed it to maintain surveillance over the Han River and a key valley. The battalion's 81mm mortars were centrally located so they could support the entire force. Again, to lower the probability of detection, the mortars and the available supporting artillery units were instructed to fire only with the approval of the battalion headquarters. And as was done the previous night, all activity stopped at daylight.

The units spent the evening of D-1 in the same manner—refining fighting and hide positions and caches. They also sent out local patrols to familiarize the units with their new surroundings. The reconnaissance and security patrolling continued throughout the next two evenings. Severe limits were placed on the companies concerning size, activity, scope, and time limits for all patrols in recognition of the fact that the battalion's number one priority during this phase remained the preservation of its hide posture.

Elsewhere in the battle, the Orange and Blue forces had begun their reconnaissance and counter-reconnaissance efforts in the corps security area. The battle began in earnest on D-Day with the corps covering force firing on the forward Orange force elements. The handover of the battle occurred early on D-1, and in the 25th Division's sector the Orange forces were delayed forward of the main battle area.

Later that day, key bridges over the Han were blown to slow the enemy advance. Additional obstacles, attack helicopters, close air support aircraft, and long-range antitank fires were synchronized with the ground maneuver to further damage enemy forces. Nevertheless, on the morning of D+2, Orange forces began to cross the river using a combination of RB-15s, fording operations, and Marine Corps LVTs (landing vehicles, tracked). The Orange force's river crossing meant that the stay-behind force was indeed completely cut off from other friendly units. Soon the field artillery was too far away to provide supporting fires.

On the evening of D+2, the battalion infiltrated Companies A and C and a battalion CP out of their hide positions and conducted a crossing of the Han River using the RB-15s that had been previously cached. The crossing was not detected by any of the Orange forces, and the two companies were able to establish patrol bases on the north side of the river before daylight on D+3 (Figure 4). As darkness fell on D+3 the two companies began active patrolling to acquire soft enemy targets that fell within the guidelines of the attack criteria. Company A discovered a Marine regimental CP in its area and began to formulate an attack plan. The attack was conducted at 0200 hours on D+4. The battalion's 81mm mortars supported with limited preparatory fire from a forward firing position and then immediately returned to their hide position.

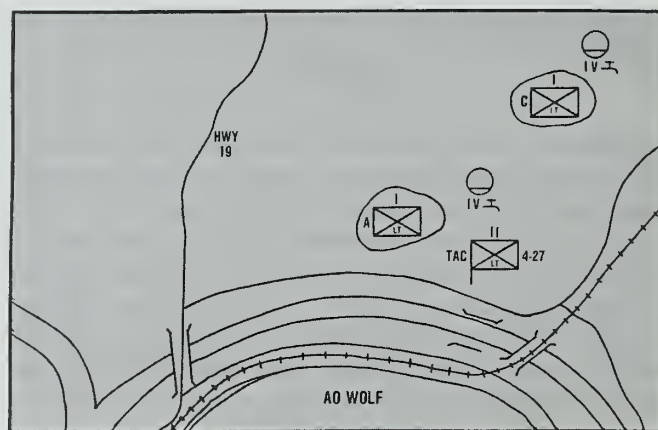


Figure 4

The attack achieved total surprise and the controllers assessed the CP and its guard contingent of 75 soldiers as "completely destroyed." Meanwhile, Company C was scouting for suitable targets. While Orange forces were sighted, targets in accordance with the attack criteria were not. Later on D+4, Company C did discover a division CP, but an administrative halt in the exercise precluded an attack.

In the main battle area, the brigades of the 25th Division continued to delay the Orange forces. By the time the first half of the exercise was concluded on D+4, the stay-behind force was some 25 kilometers behind enemy lines.

When the Blue forces counterattacked and assumed the offensive, the 4th Battalion, 27th Infantry received a mission to seize two critical crossing sites over the Han River for

linking up with elements of an advancing armored task force that would turn the flank of the Orange forces and drive deep into the Orange rear areas, unhinging their defense. Companies B and C were infiltrated to seize a fording site over the river; Company A and a composite company consisting of the scout platoon, engineer platoon, headquarters personnel, and commanded by the S-3 Air were infiltrated to seize a key highway bridge (Figure 5). Up to this time, none of the companies had been detected by the Orange forces, and the original battalion and company hide positions remained undiscovered. The time for the seizure of both objectives was set for 0400 hours on D+6.

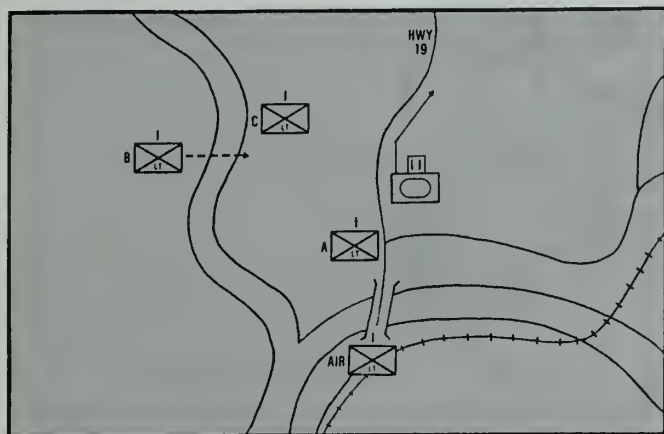


Figure 5

Throughout the hours of darkness on D+5 and D+6, an extensive reconnaissance of the objectives was conducted. Requirements for seizure were defined, demolitions on the bridge were pinpointed, and actions for taking out the demolition guard unit and units in the areas of the bridge and the ford site were rehearsed. The battalion mortars were also infiltrated forward to provide fire support for both objectives.

Both objectives were seized as planned, and Orange units at both locations were neutralized within 20 minutes. In addition, Company C attacked and destroyed an Orange Marine LVT company that was in an assembly area near the fording site.

In the main battle area, the division's attack started on time with two brigades abreast. The 3d Brigade in the south conducted a night infiltration to seize key objectives along the route of an advancing armored task force. The brigade's objectives fell as planned, and the division commander poured the armored spearhead through the corridor that resulted.

Four hours after the 4th Battalion units seized the fording site and the bridge, the Blue armored spearhead reached the bridge, crossed in stride, and continued the attack. As a result, the vast majority of the Orange forces to the west of the Han River were encircled, and the U.S. I Corps and 25th Division commanders had their forces in position to drive deep into the rear of the Orange zone.

After linkup with the armored force at the bridge, the battalion participated in more conventional operations

(battalion air assault, movement to contact, deliberate attack) until the exercise concluded on the ninth day.

LESSONS LEARNED

The stay-behind operation contributed significantly to the 25th Division's mission and the triumph of the friendly forces. The real value of the operation, though, lay in the lessons that were learned concerning the light infantry's ability to perform this kind of mission.

The following lessons are presented in the format of the battlefield operating systems:

Intelligence:

- A thorough analysis of the assigned terrain to select locations for the hide positions is vital in a stay-behind unit's IPB process. Areas must be available that keep the unit from being detected from the air. While in control of friendly forces, the hide positions should be checked by friendly aircraft.
- Stay-behind forces should plan to use all available military intelligence assets such as REMBASS, GSR, unit scouts, and PEWS (platoon early warning system).
- Stay-behind forces will find that passively monitoring the brigade intelligence net is a valuable way to receive enemy situation updates, and it can serve as a way to track the main battle.
- Leaders in a stay-behind operation must have a greater understanding of the enemy's order of battle and organization for combat. Individual soldiers must be more proficient at recognizing enemy vehicles and equipment, and should have some knowledge of enemy CP set-ups and antenna configurations.

Maneuver:

- As in any other mission, a combined arms task organization is desirable for stay-behind operations.
- Much of the success or failure of a stay-behind operation can be laid to the selection of the stay-behind area of operation. In the case of AO Wolf, the 3d Brigade commander selected an ideal location, situated along an army boundary. Any Orange force that intended to find or pursue the stay-behind force would have to scale steep hills and be prepared to search for days. AO Wolf was off the natural lines of enemy advance or retrograde; if an Orange force passed through AO Wolf, it would have to cross the Han River or a major tributary twice, thus requiring two deliberate crossings.
- The precise positioning for a stay-behind force should reflect a trade-off between the need to disperse the force to keep it hidden and the need to assemble it rapidly and strike at appropriate targets. A good way to find this balance is to assign company AOs. The AOs should have enough space for the company hide positions but those positions should still be close enough to each other to reinforce or to allow rapid assembly. The trade-off, of course, depends upon the factors of METT-T.
- The establishment of attack criteria eliminated unnecessary radio traffic between commanders and gave



the battalion commander a good way to convey to the company commanders the type of targets in the enemy rear that they were to hit. To ensure that his attack criteria fit his higher commander's intent, the commander of the stay-behind force had them approved by the brigade commander.

- Key training for the stay-behind operation proved to be that used for training for raids, assault boat river crossings, infiltration attacks, and linkup operations, and in hiding and camouflage techniques.

- A global positioning system (GPS) is an excellent tool for stay-behind units to use to emplace and locate well hidden cache points and to conduct linkup operations.

- Deception operations (in the form of making the enemy think the stay-behind force is in the main battle area) are a necessary part of a stay-behind operation. Dummy radio traffic and vehicle movement may reinforce an enemy expectation that will protect the stay-behind force.

Fire Support:

- One of the biggest challenges the battalion faced was maintaining a means of fire support other than its organic mortars. One of the more challenging times for the battalion was holding the bridge over the Han River for the four hours that it took for the armored task force to advance for linkup. During most of those four hours, the battalion was out of range of its supporting artillery, and the indirect fire means were limited to the battalion and company mortars. The division commander decided to accept the risk involved because of the advantages to be gained. Close air support and attack helicopters are a possible alternative, as are artillery raids in conjunction with maneuver operations.

- Mortars should be used from the hide position only

in self defense. Mortar fire in support of offensive operations should be conducted outside the hide area; the mortars should then move back to their own hide locations.

Air Defense Artillery:

- Because of higher priorities elsewhere, the battalion did not have any air defense artillery systems attached for the operation. Passive air defense was stressed instead.

Mobility, Countermobility, and Survivability:

- The assault boats that were in AO Wolf proved essential for movement across the Han River. The attachment of an engineer platoon was also most helpful. Its soldiers surveyed an appropriate river crossing site and helped prepare the boats.

- All activity must be at night, both inside and outside the hide position. Vehicles should move only at night and only under strict control.

- Within the hide area, individual positions must be dug in and well camouflaged. For large pieces of equipment and activities (such as vehicles, water trailers, command posts, and the like), abandoned buildings, awnings, haystacks, and other indigenous structures can be put to good use.

- While the hide area is still within friendly control, friendly aircraft overflights should be scheduled to check the camouflage.

- Only essential vehicles should be planned for the hide position. All ten vehicles the battalion used within the area of operations were used for multiple purposes (communications, cache positioning, casualty evacuation, movement of mortars). Civilian vehicles that blend in with the surrounding area are a better alternative, when they are available.

Combat Service Support:

- The "pack mule" concept made sense for this operation for several reasons: The soldiers were transported to the hide position and were not required to walk any great distance before unloading the equipment and supplies they had to carry; this reduced the need for additional vehicles in the hide position, simplified the distribution of supplies, and reduced logistical movement to a minimum.

- All resupply activity must take place at night. This means that drivers, aidmen, mechanics, and other support personnel must be proficient in using night vision goggles.

- The location and exact composition of each cache site must be planned carefully in accordance with METT-T and the commander's intent. The commander of the stay-behind force must be personally involved; he must choose the location of any caches outside the hide area, for example, because they will affect the unit's ability to accomplish its mission. Caches should be redundant (both inside and outside the hide area); the loss of a cache site cannot be allowed to jeopardize the mission. The battalion's S-4 kept a running total of the supplies in each cache and recommended the shifting of supplies when appropriate. To provide this redundancy, the battalion planned for and cached twice as many supplies as it would normally require.

- The caches positioned outside AO Wolf (Figure 4) allowed the companies on the north side of the Han River to resupply during the first and second phases without having to return to the AO. Each cache site, inside and outside the AO, was guarded by either a squad or a fire team; the guards had radios to use in linking up with friendly units and in reporting enemy activity.

- Caches must be either dug in below ground level or placed in existing buildings to prevent enemy forces from discovering them. Guards must be assigned to all cache points and must be provided with communications equipment, with the battalion assigning call signs and frequencies.

- In the hide position, commanders at all levels must carefully monitor supply levels, and rationing may be required. The 4th Battalion, 27th Infantry knew going into the exercise that water would have to be rationed. One of the measures used to control water use was to limit shaving to every third day.

- Redundant equipment should be located in the hide position. There will probably be no opportunity to evacuate any equipment for repair, and the maintenance capability within the hide area will be strictly limited to operator and organizational levels.

- Trash control can become a big problem in the hide position. Trash must be reverse cached, dug in, and concealed.

- Although the battalion did not use them, single helicopter resupply operations at night can be used in emergencies. The resupply point should be located outside the hide position.

Command and Control:

- The commander of the stay-behind force must decide

early how to position his key personnel, because their positioning may be different from that used in normal operations. The composition of the quartering party must also be carefully considered.

- The commander's intent must be fleshed out with clear-cut contingencies. For instance, what if one of the caches is discovered? What if a firebreak breaks out? What happens if indirect fire is received? Does a patrol try to return to the hide position if it is discovered and fired upon? These are only a few of the types of questions that should be covered in detail in a contingency annex for the stay-behind force. All members of the stay-behind force must be familiar with the contents of the annex and must rehearse the operations.

- In the hide position, runners should be the principal means of communication, with wire the secondary means, and wire must always be dug in.

- The emission of radio waves from the hide position must be reduced in every way possible. Planners must consider using TACSAT (and TACFAX), directional antennas, low power, and even the local telephone system. The citizen band radios used by local taxicabs are another means of local, unsecure communication.

- The use of long range AM radios should be considered, because they are less susceptible to direction-finding equipment. Scouts and the guard elements with the cache sites outside the hide area can certainly use them.

- Radio operators must be proficient in the automatic remote keying of secure radio equipment, because it is impractical to change secure variables by hand.

- Soldiers and leaders must be mentally prepared for stay-behind operations and must plan for the inactivity, isolation, and boredom inherent in such operations, and for the effects of reverse cycle operations. Dispersion, minimized communications, and the need to stay hidden will all require leaders to adjust their methods of supervision. As in no other kind of operation, leaders at all levels must be prepared to decentralize operations.

- The passive monitoring of the brigade command and intelligence FM nets gives the stay-behind force a good idea of the flow of the main battle. It allows the stay-behind force to gauge accurately when and where it will execute any offensive activity.

- Individual unit tactical SOPs should address stay-behind operations and methods of applying the lessons noted here.

TEAM SPIRIT 90 gave the 4th Battalion, 27th Infantry a unique opportunity to perform a stay-behind mission as part of a large-scale exercise under simulated combat conditions. This stay-behind mission proved to be an effective method of using a heavy-light team.

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TRAINING NOTES



Rifle Marksmanship Lessons

CAPTAIN PHILIP K. ABBOTT

In the U.S. Marine Corps, marksmanship tradition has been at the pinnacle of all training events. Although the procedures and techniques the Marines use are generally the same ones we use in the Army, they focus more on a progressive marksmanship training system. The system first emphasizes learning, reviewing, and reinforcing the fundamental firing skills and only later shifts to emphasizing the application of marksmanship skills in combat. Through this progressive program, Marines achieve a high state of combat readiness, because each individual rifleman develops confidence and becomes thoroughly proficient with his weapon.

In an effort to improve our soldiers' overall marksmanship skills, my company underwent a modified version of Marine Corps marksmanship training, and some of the noncommissioned officers went through a Marine Corps marksmanship coaching school. My unit found this experience beneficial, and I believe certain aspects of the Marine Corps' marksmanship training might be incorporated into the Army's marksmanship programs.

The fundamentals a rifleman must learn during Marine Corps marksmanship training are broken down into three phases: preparatory marksmanship

instruction, known-distance (KD) range firing, and field range firing. These three phases are taught in sequence, and all three are considered whenever marksmanship training is conducted, regardless of the riflemen's level of experience.

FOUNDATION

Preparatory marksmanship instruction is the training riflemen receive before firing on a live fire range. (Marines go through one week of preparatory instruction before each live fire.) It is during this phase that riflemen build a sound foundation by either learning, reviewing, or reinforcing good firing principles. Since the degree of proficiency a rifleman achieves depends upon the foundation that is built during this phase, the correct firing habits must become second nature to him. Drilling in these fundamentals, along with continued supervision, brings the greatest results. Although proper firing can be a complex process, when it is practiced frequently enough and precisely enough, it becomes a learned skill the riflemen will retain.

(It is equally important for every rifleman, regardless of his level of experience, to refamiliarize himself

periodically with the fundamentals, because even the most experienced rifleman sometimes does not properly apply the correct fundamentals. Any such deficiencies can be overcome, however, through the use of dedicated coaches and extensive dry fire exercises.)

Firing on a known-distance range is probably the most critical phase of the Marine marksmanship training program. It is during this phase that a rifleman has an opportunity to put his marksmanship fundamentals into practice.

On the KD range, the Marines use sitting, kneeling, standing, and prone firing positions. They do not use sandbags for support; instead, they use their rifle slings to help stabilize their weapons.

This phase serves a number of purposes, but the primary one is to give the rifleman an opportunity to make adjustments to compensate for the effects of weather. It is important for a rifleman to understand how the various weather conditions can affect his firing performance; his skill in overcoming the negative effects of weather will determine his skill in firing on a range and, more important, in combat.

The Marine Corps goes to great lengths in teaching each rifleman the

importance of weather and its effects on a round's trajectory. In fact, each rifleman is issued a marksmanship data book that he fills out every time he qualifies, and he continues to use it as a reference whenever he undergoes marksmanship training. This book, when properly used, greatly improves his overall marksmanship performance.

A known-distance range also serves as a multipurpose range that enables the rifleman to obtain a battlesight zero efficiently from distances other than the all-too-common field expedient 25 meters and gives him the opportunity to engage targets out to a range of 500 meters. Too, a known-distance range allows a pit crew to experience the sound of rounds snapping overhead.

During the field firing phase, the riflemen apply the fundamentals they have learned on the KD range. The field firing ranges serve a three-fold purpose—to incorporate the application of basic marksmanship fundamentals to the engaging of combat targets, to further build a rifleman's confidence in his weapon, and to reemphasize the importance of obtaining a battlesight zero.

The Army has progressed in this area with the development of the Multipurpose Arcade Combat Simulator (MACS) and the Weaponeer. Still, we must not regard these as substitutes for the KD

range, but as training aids in our overall marksmanship training program.

Over the past several years, the Infantry School has taken a more serious approach in its efforts to revitalize marksmanship training. The development of the marksmanship training units and the master's program for noncommissioned officers are two excellent additions to the Army's marksmanship program. But these alone have not completely solved our marksmanship and weapon proficiency problems.

The new version of Field Manual 23-9, Rifle Marksmanship, has considerably improved unit marksmanship programs, but marksmanship training should not be limited to the doctrinal framework outlined in regulations, circulars, and unit status reports. Our inability to accept and adopt innovative and realistic marksmanship training into our existing programs may well be the crux of the problem. There are several reasons for this, but the primary one is the mistaken perception that Army Regulations and Field Manuals prohibit certain exercises.

First, we should reinstitute the use of known-distance ranges and make this a mandatory phase of marksmanship training. When a rifleman goes directly from the preparatory phase to the field fire phase, he never really learns to use his weapon completely. The Weaponeer

does duplicate a KD range to some degree, but it does not include the effects of weather.

Second, the four basic firing positions—kneeling, sitting, standing, and prone—need to be included in all phases of Army marksmanship training. When we go to combat we won't have nicely prepared foxholes or neatly stacked sandbags. Our current marksmanship program focuses on defense rather than offense. We must change this mind-set and bring it into line with the spirit of the infantry, which is attack.

Third, marksmanship training should be included in every unit's mission essential task list (METL) to ensure that it routinely receives the necessary attention.

Finally, each division should conduct an annual marksmanship competition. This will not only stimulate interest and desire on the part of the individual rifleman, it will directly involve leaders at all levels.

Good marksmanship is a critical skill that the Army needs to emphasize more if it is to prevent further decay in this area.

Captain Philip K. Abbott commanded a rifle company in the 4th Battalion, 22d Infantry, 25th Infantry Division when he wrote this article. He previously served as a battalion adjutant and assistant S-3. He is a 1982 ROTC graduate of Norwich University.

Marksmanship and the "New Focus"

CAPTAIN J. MARK CHENOWETH

I read with great interest Major General Carmen J. Cavezza's comments on the "new focus" on marksmanship (INFANTRY, November-December 1990, pages 1-2). While I agree whole-

heartedly that it is time for the infantry to move to precision marksmanship, I am concerned with the path we are taking to get there.

The new marksmanship program and

infantry one station unit training (OSUT) program of instruction (POI) should develop a more proficient marksman. General Cavezza says that "our infantry units will have to be far

better prepared and devote more time to marksmanship training than they are currently doing if they are to meet and sustain the planned higher proficiency levels in our infantry soldiers." The question is: How do we integrate those skills into our infantry units?

There are a number of obstacles to overcome if we are to improve marksmanship proficiency in our units. The first and most formidable obstacle is the lack of marksmanship skills among infantry leaders. If our officers and noncommissioned officers cannot shoot, how can they train their subordinates to shoot? This does not mean that a commander (at whatever level) has to be the best shot in the unit, but he does have to be proficient with the unit's weapons and with the fundamentals of marksmanship.

Most senior NCOs learned to shoot at some time during their careers but have been too busy running the ranges to get down and shoot. If a commander asks his first sergeant or platoon sergeants to give him a quick, informal class on basic marksmanship, many of them will mumble something about the acronym BRASS (breathe, relax, aim, sight, squeeze) or the eight steady hold factors (though I doubt that many can name all eight). Few will be able to describe accurately how to zero an M16. This lack of knowledge is not solely the NCOs' fault; there has been no significant command emphasis on marksmanship for a long time, and NCOs have enough to do without taking on tasks that seem to be of little concern to their commanders.

The second obstacle is the over-

but they are not "the answer." The fact is that to learn to shoot well we have to shoot a lot of live bullets, and we can buy a lot of live bullets for the price of one Weaponeer.

A far less expensive alternative, though definitely not at the cutting edge of technology, is the use of quality air rifles on an indoor range. All of the fundamentals of marksmanship, in fact, can be taught, demonstrated, and practiced in a company area with only a small investment of training dollars. Other low-tech options include target-box, dime-washer, and dry-fire exercises. These are not just activities to keep the troops involved in concurrent training while the commander is at the range. Competitive marksmen spend countless hours dry firing to train their muscles how to shoot, to improve their technique, and to sharpen the mental concentration that is required to achieve marksmanship proficiency.

**So let the wild circle of argument rage,
on what wins, as war comes and goes,
many new theories may hold the stage,
but the man with the rifle knows. (From
"The Man with the Rifle," author unknown.)**

One way to achieve this is to require that all infantry officers wear their marksmanship badges. Army Regulation 670-1, Paragraph 32-16b(2), says, "at least one marksmanship badge will normally be worn by all personnel except those personnel exempt by Army regulation." I believe that if infantry officers had to wear a "bolo" badge they would become far more concerned with acquiring marksmanship skills and earning expert scores.

Another step to make sure officers can shoot is to require them to qualify with the service rifle even if their TOE positions call for them to be armed with pistols. Many of our officers have not fired rifles since they pinned on captain's bars. Marksmanship is a perishable skill that must be reinforced. (Officers often say, "I carry a pistol to the field for training exercises, but if a war ever starts I'm going to get a rifle." But they are only fooling themselves.)

reliance on technology. For too long we have assumed that it was the rifle's fault if we missed and that we should design one that wouldn't let us miss. We are looking for a tiny shoulder-fired guided missile that will seek out enemy personnel and kill them wherever they may be hiding. Although that sounds good in the movies, history is full of examples of the great things skilled marksmen with good rifles can do. In Afghanistan, for example, the Soviets learned that being technologically superior was no panacea. The Afghans used ancient bolt-action rifles and expert marksmanship with devastating effect. The British learned the same lesson from the Boers.

We spend millions of dollars on such devices as the Weaponeer and the Multipurpose Arcade Combat Simulator (MACS) looking for quick, easy, high-tech answers to marksmanship training. These are excellent tools and they do have a role in our training programs,

Optical sights, for a select few expert marksmen in each platoon, are an excellent idea, provided they are mounted in a manner that allows the use of the iron sights as well. Telescopic sights *do not* make a soldier a better marksman; they *do* improve his ability to aim more precisely under certain conditions. Their utility is severely degraded by inclement weather, though, and few are sturdy enough to take the beating that an infantryman's rifle is subjected to.

The AN/PAQ-4 infrared aiming light (INFANTRY, November-December 1990, pages 6-7) is another attempt to resolve through technology what we lack in training. Any device that emits infrared light can be detected. The metascope (AN/PAS-6), first generation technology that has been available for years, can detect infrared light sources from several miles away. A better answer may be to use the AN/PVS-7 night vision goggles to detect enemy targets and then engage those targets with a weapon equipped with AN/PVS-4 or AN/TVS-5 night vision sights. These devices are passive; they emit no light to be detected. They can also be used with a daylight filter to provide a telescopic sight for weapons 24 hours a day.

SEMI-ANNUAL RIFLE MARKSMANSHIP WEEK

PHASE I. Preliminary Marksmanship Training (14 hours)

1. Mechanical Training
 - Operator maintenance on rifle, magazine, and ammunition.
 - Adjust sights on rifle.
 - Load and unload magazine.
 - Immediate action.
2. Fundamentals of Rifle Marksmanship
 - Four fundamentals of marksmanship.
 - Dry fire exercises (target box, Riddle sighting device, dime-washer, M16 sighting device, Weaponeer).
 - Effects of weather and ballistics (wind, light and temperature, mirage, trajectories).

PHASE II. Basic Rifle Marksmanship (32 hours)

1. Shot grouping (25-meter, using the brown, back side of the cardboard E-silhouette; concentrate on front sight without an obvious aiming point; shoot five-round groups).
2. 25-meter battlesight zero.
3. 25-meter downrange feedback exercise (using scaled silhouette target, NSN 6920-01-167-1398).
4. 400-meter known distance (KD) range familiarization firing.
5. 400-meter known distance qualification (50-shot course of fire using Rifle "D" Target, FSN 6920-922-7450, centers FSN 6920-922-7451).

PHASE III. Advanced Rifle Marksmanship (25 hours)

1. Quick fire.
2. Rapid semiautomatic fire.
3. Automatic fire.
4. NBC fire (moving and pop-up targets).
5. Night fire (with and without night vision devices and NBC gear).
6. Field fire (moving and pop-up targets, multiple targets).
7. Record fire (same as current qualification range).

Qualification Standards: Combined scores of BRM KD Qualification (maximum score 250 points) and ARM Record Fire (maximum score 40) for a combined maximum score of 290.

EXPERT	251-290
SHARPSHOOTER	216-250
MARKSMAN	167-215
UNQUALIFIED	166 or below

The third obstacle is the weapon itself—the M16 rifle. The M16 is one of the finest rifles in use by any army in the world. Although my personal preferences lean toward a .30 caliber battle rifle, I understand and appreciate the capabilities of and the benefits offered by the M16. The M16A1 suffered from a number of shortcomings, most of which were corrected with the M16A2 and its heavier bullet. The biggest problem now is the trigger and sear assembly of the M16A2 and the abominable three-round burst. The three-round burst mechanism has three different sear engagements, which requires three distinctively different trigger pulls when the rifle is fired in the semiautomatic mode. This makes precision marksmanship extremely

difficult, because trigger control is the key to accurate fires.

Every infantryman does not need to be capable of firing a rifle accurately when it is set on full automatic. We have dedicated automatic riflemen we can train to do that. For example, we could give these soldiers M249 squad automatic weapons or selective-fire M16s for full automatic fire. At the same time, we could give the riflemen M16A2s equipped with trigger assemblies from AR-15 rifles. This would result in a fine semiautomatic-only rifle that could be used as a precision tool to deliver accurately aimed single shots. The "spray and pray" mentality of sending out a three-round burst and hoping one of them connects is counter-productive.

The fourth obstacle is our training

and qualification courses of fire. We have to get away from pop-up targets and get back to known distance (KD) ranges. A rifleman, to improve his skills, must have downrange feedback. He must know precisely where each bullet hits so he can determine why. If a commander really wants to know how well his unit can shoot, he should have them qualify on a KD range. He should also issue every soldier a scorebook and require that they record every shot they fire. Soldiers will be able to look at their targets and see exactly where the bullets hit, analyze all of the firing data (wind, light, temperature, mirage, ammunition lot, and the like) and really learn how to make every shot count. They will learn how to call their shots and attain the goal of "one shot-one kill."

The proposed training plan for a marksmanship week included here works best when conducted over a five- or six-day period, while the soldiers are bivouacked on a range. This "Range Week" concept allows total concentration on marksmanship skills, and it can be adapted to include concurrent training on other weapon systems. The plan can easily be modified to each unit's training requirements, and the times can be adjusted on the basis of the unit's level of training.

We must train infantrymen to shoot. To do that, all infantrymen, from the commander to the newest recruits, should start with the basics. We must teach the fundamentals, and we must practice. Imaginative leaders can make marksmanship training challenging, rewarding, and fun. There will be no excuses if we fail to produce infantrymen who can employ their rifles accurately.

As General Cavezza stated, "Regardless of the intensity of the conflict, the infantryman is the ultimate weapon."

Captain J. Mark Chenoweth is an assistant professor of military science at Norwich University. He previously served as company commander and staff officer in the 4th Battalion, 31st Infantry. He has attended sniper school and participated in the All-Army Marksmanship Competition. He is a 1984 ROTC graduate of Oklahoma State University.

Battalion Signal Officer

CAPTAIN THOMAS J. MARTIN

Suppose you are the S-3 or executive officer (XO) of an infantry battalion that is about to gain a new signal officer. (Or maybe you're the one who is new in the battalion and the signal officer has been there for a while.) After considering how your communications support has worked in the past, you will want to start on the right track with this officer by telling him what you expect of him and by assigning him some goals and objectives for his duty assignment.

Before you can do that, however, you will need to consider his abilities, training, and experience. The following outline of a battalion signal officer's duties and responsibilities, along with a list of possible performance objectives for him, should give you a start. Each of the objectives, wherever possible, includes a means of making an objective determination of the officer's performance.

Although the ultimate mission of the combat support branches, including the Signal Corps, is to support maneuver forces, including the infantry, this concept is not as prominent in a signal officer's formal training. In fact, his duty in your unit carries the Additional Skill Identifier (ASI) 6B, which cannot be earned at the Signal School at Fort Gordon, Georgia. It is awarded at the Field Artillery School at Fort Sill, Oklahoma, when an officer completes the Battalion/Brigade Signal Officer Course (BBSOC). (This used to be called the CESOC, or Communications-Electronics Staff Officer Course.)

If your signal officer completed BBSOC, he received extensive hands-on training on equipment that is found

in your unit. This includes FM radios, radioteletypewriters, wire and telephone systems, and communications security equipment. The course is also increasing its emphasis on SINCGARS (single channel ground and airborne radio system) and MSE (mobile subscriber equipment) in anticipation of the fielding of these systems to maneuver forces.

If he has not attended BBSOC, though, you will need to consider what training he received in his basic and advanced courses. In a nutshell, he completed the common core subject material prescribed by the U.S. Army Training and Doctrine Command (everything from Soviet doctrine to field sanitation); then he was trained in the operations of signal battalions and brigades. He was also trained in the employment and control of equipment found at echelons well above your unit.

The lesson for you here is that if you have an opportunity to influence the selection of your next signal officer, ask for one who has attended BBSOC.

Local conditions, too, will determine how much experience the signal officer has had before he gets to your unit. At installations in the continental United States, new officers out of the officer basic course will usually be placed in a signal unit for his initial assignment. This is a good policy, because this assignment develops and tests the officer's technical skills and gives him an understanding of the missions and capabilities of the brigades, divisions, or corps he may support. It also gives him a good ground-level view of supply and maintenance, because he is responsible for 10 to 50 vehicles, generators,

communications systems, and the like.

On the other hand, if a new Signal officer is initially assigned to a small post or isolated overseas location where there are few if any signal units, he may get no such opportunity, and his initial assignment may be to an infantry unit. If this turns out to have been the case with your signal officer, his performance will depend heavily on the guidance you give him from the beginning.

The following ideas will give you a start in developing a duty description for him. Then you can adjust the scope of his duties to reflect your type of infantry organization.

- He is responsible for all communications matters that will influence the battalion's operations, training, support, and maintenance missions.

- He is responsible for successful communications at every level within the battalion, both in garrison and in all tactical environments.

- He leads the communications platoon of 20 to 30 soldiers. He is responsible for the performance of the platoon in its primary missions, which are to provide battalion-level tactical communications and to provide organizational maintenance of all electronic equipment in the battalion. He is responsible for the platoon's readiness and for the proper operation of its assigned equipment.

- He is directly responsible for training battalion-level signal soldiers in their assigned duties and in the common soldier skills. He has staff responsibility for training signal soldiers elsewhere in the unit in their MOS tasks, and for the signal related training of all soldiers.

- As the communications security

(COMSEC) custodian, he is directly responsible for the physical control of the battalion's COMSEC equipment and related sensitive items.

The following list will help you develop goals and objectives for the signal officer's duty performance. In each area, suggestions for assessing the officer's progress are included. This list constitutes a set of high goals; unless yours is an ideal unit, you will not be able to attain all of them at the same time.

To maintain continuous communications in tactical situations. Although there is no scale on which to measure this objective, it belongs at the top of the list because it is the signal officer's mission statement. Some independent judgments may be available if your unit conducts an ARTEP or deploys to a major training center, but the final decision is the unit commander's.

To develop and implement a training plan for communications soldiers and radio operators. This plan should be the signal officer's primary contribution to the unit training schedule and periodic training guidance. The plan can be assessed through the soldiers' SQT scores and the abilities they demonstrate each time they talk on the radio.

To execute a thorough preventive maintenance program for assigned radio equipment. This also belongs on the unit training schedule. For example, your signal officer should arrange for regular five-mile radio checks of all assigned radio systems. He should provide the distant station and enforce the proper documentation. This is the single most valuable action, but the most consistently ignored. The unit's operational readiness (OR) rate is the most common maintenance indicator; the average processing time for job orders and requisitions is also important. This goal should be broken down into several parts, such as the OR rate, calibration, requisitions, and the like.

To maintain the following standards of training within the communications platoon: 100 percent SQT validation, with an average score of 80 or higher; 100 percent APFT (Army Physical Fitness Test) qualification; 100 percent

weapons qualification; and 100 percent licensing of the operators of the assigned vehicles and generators.

To maintain strict accountability for battalion COMSEC assets. This area is governed by specific regulations with the goal of avoiding measurable incidents (namely, violations and insecurities). In the absence of unfavorable indicators, you can assess the COMSEC system in your unit at any given time by visiting the COMSEC vault and asking for an overview of the accountability system. You will probably learn something new about the extensive documentation that is behind the scenes in this area.

To support the HHC commander in supply control, crime prevention and physical security, reenlistment, and the quality of life of the soldiers. The HHC commander will be happy to give you his evaluation of the signal officer (and the rest of the staff) in these areas.

To continue his own professional development. You will want to encourage the signal officer's progress in this area, subject to readiness requirements and the unit's deployment schedule. Possible goals include military correspondence courses or credits toward an advanced degree.

To maintain his own physical conditioning. The officer can state a specific goal for his own APFT, or set a goal for participating in local 10-kilometer runs or other athletic competitions.

In addition to these objectives, other possible objectives include:

- Preparing for deployment to a major training center.
- Staff planning for MTOE changes, unit relocations, and the like.
- Fielding of a new communications system.

These goals will not be met, though, if you just hand them to your signal officer and turn him loose. He will need guidance and training before he can even attempt to influence the current state of affairs in the unit.

To develop this officer's skills, you should see that he attends some training courses while in your unit. One of the most important is the Standardized COMSEC Custodian Course (SCCC),

which is required by the governing regulations. This course is offered at the Signal School and in overseas theaters. The course material is also being incorporated into the Signal Officer Basic Course; if your signal officer has completed this instruction, be sure you have the documentation. Under current funding restraints, some units have arranged for instructors to come to their locations, certifying up to 50 people for the temporary duty costs of only three instructors.

PLL COURSE

Another valuable course is the prescribed load list (PLL) course given at your or a nearby installation. Batteries and parts for radio equipment can be expensive, and your signal officer's share of the Class IX account can be considerable. He has to understand supply, maintenance, and readiness (SMR) codes, maintenance parts list (MPL) stockage, and all the other supply terminology.

In addition to these courses, you will have to train your signal officer in the tactical missions of the unit. His formal training covered combat operations only in the broadest sense, with no tactical application or maneuver-based field training. The only way to overcome this deficiency is to get him out of the tactical operations center and down to the action. Have him take his radio-teletypewriter rig and some other equipment and become the objective for a reconnaissance mission. Send him out where one of your companies is conducting a passage of lines in the middle of the night. Quiz him on the commander's intent after a mission briefing.

More fundamentally, you will have to develop his skills in leadership, training, and discipline as they are exercised in the infantry. Although many signal units also have high standards of training, these units do not do anything to the enemy. The aggressive, decisive leadership that prevails in the infantry is not built into a signal officer. Only you can develop his battle focus to your standards.

Finally, although duty in a maneuver unit is probably the most important assignment in the Signal Corps from a wartime point of view, many signal officers do their best to avoid this duty. Some have developed an attachment to fluorescent lighting and coffee pots. Others have heard horror stories about signal officers in maneuver units who were fired or rated poorly for things

that were beyond their control.

Leaders within the Signal Corps have part of the responsibility for dispelling such misconceptions. But only you, the signal officer's leader, can give him a clear set of goals and, in turn, acknowledge his contributions to the unit. If you will start with the signal officer you have now, give him a clear mission statement, and recognize his achieve-

ments, then many other capable signal officers will follow, and your continued success will be assured.

Captain Thomas J. Martin is a Field Artillery group signal officer assigned to the Southern European Task Force (SETAF) in Italy. He previously served as signal officer of the 1st Battalion, 327th Infantry, 101st Airborne Division. He is a 1984 ROTC graduate of Georgetown University.

SWAP SHOP



MARKSMANSHIP WITH CHEMICAL PROTECTIVE MASKS

Traditional marksmanship techniques do not work when a rifleman is wearing the M-17 protective mask. The filter in the cheekpiece of the mask prevents him from getting close enough to the stock to see through the sights. It is possible, however, to use the mask as a support and to "instinct shoot" with acceptable combat accuracy:

In the prone position, the firer allows the barrel of the rifle to rest on a support and presses the butt of the stock firmly against the mask's voicemitter. The lower part of the butt rests in a pocket formed by the thumb and forefinger of his left hand. The left hand, in turn, may have to be supported in the crook of the right arm. (Because the left hand cannot grasp the forward hand grips, the use of any available support for the rifle barrel gives the best results.) This three-point stability allows the rifleman to put out steady, accurate fire. (Left-handed shooters, of course, reverse the instructions.)

When masked, the firer uses the sitting position rather than the kneeling position. He sits as if doing sit-ups, then crosses his ankles and places his upper arms just forward of his knees. His left hand is placed under the magazine and the rifle butt pressed firmly against the voicemitter.

For both the sitting and the prone positions, the rifleman sets the rifle buttstock firmly against the nose of his mask, which permits him to aim through the sights. Shooters who have difficulty using the sights may aim by looking directly over them. With practice, both methods yield acceptable accuracy. Recoil from the M16 is scarcely felt in this position.

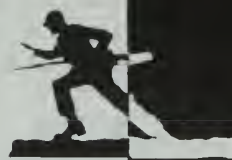
When standing, a masked marksman replaces the voicemitter support technique with instinct shooting. This technique resembles a combat pistol stance, and it requires a quick snap-shot before muscle strain decreases accuracy. The rifleman holds the weapon normally by the pistol grip and foregrip, takes a step toward the target, raising the weapon as he does so until both arms are fully extended. He does not press the stock against his mask. As in combat pistol shooting, the marksman fires a shot as soon as the sights come level with his eyes. Because this stance is the least stable, it requires the most practice.

Using these techniques, a masked rifleman will be able to meet any aggressor on a chemical battlefield with steady, accurate, deadly fire.



(Submitted by Kevin L. Jamison, a former Special Forces officer, Kansas City, Missouri.)

ENLISTED CAREER NOTES



PHYSICAL PROFILES AND ANCOC ATTENDANCE

Soldiers who hold P3 profiles and have not appeared before MOS/Medical Retention Boards (MMRB) are not eligible to attend an Advanced Noncommissioned Officer Course (ANCOC). Soldiers who have missed one or more ANCOC classes because of incomplete physical evaluation procedures are hurting their career progression.

A soldier who has a P3 profile but has not been before a board should give copies of the profile to his first sergeant and personnel staff NCO. If, after 90 days, he has not been notified of a scheduled appearance before an MMRB, he should inform his commander.

While some believe that a profile is the mark of a bad soldier, a soldier hurts his own career by not following through on the medical evaluation process.

Further information is available from servicing personnel service centers or from Infantry Branch at the Total Army Personnel Command (PERSCOM).

BATTLE STAFF NCO COURSE

A new course for staff NCOs began in January 1991 at the U.S. Army Sergeants Major Academy. The Battle Staff NCO Course integrates the current Operations and Intelligence Course and the Personnel and Logistics Course. It is designed to train battalion and brigade staff NCOs to serve as integral members of battle staffs and to manage the day-to-day operations of battalion command posts. It is a completely new course and not a simple meshing of two existing courses.

The six-week course is far shorter than the ten-week Operations and

Intelligence Course and two weeks longer than the Personnel and Logistics Course. This overall reduction in course length requires that NCOs complete some of the material they need to know by correspondence before they arrive for the resident phase.

The proposed solution is to select students six to eight months before a course begins and enroll them immediately in the Army Correspondence Course Program. After completing the required number of lessons, prospective students receive certificates, which they present to an Academy faculty advisor when they report to Fort Bliss for the resident phase.

All of the resident training is performance-oriented and is based on the ARTEPs for the heavy battalion, the heavy brigade, and the light infantry battalion. The underlying principles of the course are synchronization and "train as you fight."

NEGATIVE PERSONNEL ACTIONS

No leader wants to be in the position of having to take negative personnel actions against his soldiers, but all leaders must be familiar with the rules to follow when they must do so. And negative personnel actions sometimes yield positive results.

A bar to reenlistment is intended to rehabilitate a substandard performer. The justification for a bar usually includes circumstances that do not require further action or investigation. A soldier who is not rehabilitated is separated at the expiration of his term of service; a request for an earlier separation may be submitted in accordance with the appropriate regulations.

On the other hand, a suspension of favorable personnel action (flag) is

submitted when an unfavorable action or investigation (formal or informal) is initiated against a soldier by military or civilian authorities. The flag is removed when the action or investigation is completed, and it does not preclude further service.

More detailed information can be found in Army Regulation 601-280, Total Army Retention Program, and in AR 600-8-2, Suspension of Favorable Personnel Actions (Flags).

SELF-DEVELOPMENT TESTS

The Self-Development Tests (SDTs) that will replace the existing Skill Qualification Tests (SQTs) will test NCOs' MOS skills and their training and leadership knowledge. The Soldier's Manuals will be used as the primary sources of questions.

The U.S. Army Training and Doctrine Command (TRADOC) will begin developing SDTs this fiscal year and has planned to phase in the SDT over a two-year period. (See *INFANTRY*, November-December 1990, page 46.)

The Center for Army Leadership at Fort Leavenworth has officially defined self-development as "a planned, progressive and sequential program ... of individual study, research, professional reading, practice, and self-assessment." The new SDT is directly derived from this formalized concept of self-development.

The Army Continuing Education System (ACES) has had an active role in designing both NCO leadership development and self-development initiatives. In addition, the June 1989 Action Plan of the NCO Leader Development Task Force contains recommendations that significantly affect Army Education Centers and Learning Centers.

Two new programs now being planned will directly address NCO leader development issues: Read-to-Lead and NCO LEAD.

Read-to-Lead is designed to help NCOs meet the reading standards established by the Leader Development Task Force. Materials are now in the field that can be used in a traditional classroom with an instructor, by small groups, or for individual study.

NCO LEAD is a job-related, proponent-endorsed associate degree initiative. It complements Career Management Field (CMF) leader development training and offers soldiers an incentive for self development.

Three NCO LEAD prototypes are being produced by proponent service schools: one for combat arms (Air Defense Artillery), one for combat support (Missile and Munitions), and one for combat service support (Chaplain).

ACES, with CMF validation, will help mold degree programs to fit CMF needs and fuse these programs into CMF career maps.

The proponent schools and ACES

will jointly announce enrollment procedures and implementation instructions when they have been completed.

ACES will continue to provide NCO services and programs to assist in developing leader skills and maintaining the unparalleled professionalism that make our Army the finest peacetime force in U.S. history.

U.S. MILITARY ACADEMY PREPARATORY SCHOOL

The U.S. Military Academy Preparatory School (USMAPS) provides a unique opportunity for enlisted soldiers to gain appointments to the Academy at West Point and become officers. Because this option is not widely known, however, many deserving candidates do not apply.

Each year, the School selects 170 regular Army soldiers from more than 1,000 applications to compete for 85 appointments to the Academy. Those who are selected then report to USMAPS at Fort Monmouth, New

Jersey, in late July to begin the 10-month curriculum.

To qualify for USMAPS, a soldier must be:

- A citizen, or able to become a citizen before July of the year he will graduate from the preparatory school.

- At least 17, but not over 21, before 1 July of the year in which he wants to attend the school.

- Unmarried, with no legal dependents.

- A high school graduate or GED equivalent.

- Medically qualified for admission to the Military Academy; vision correctable to 20/20 with glasses. Pregnancy results in medical disqualification.

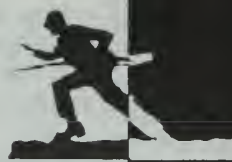
- Of high moral character, with no civilian or military felony conviction and no history of venereal infection or of alcohol or drug abuse.

- Highly motivated toward a career as an officer.

Anyone who wants to know more about USMAPS may write to the Commandant, USMAPS, Fort Monmouth, NJ 07703, or call AUTOVON 992-1807.



OFFICERS CAREER NOTES



DESERT SHIELD DEPLOYMENT REQUIRES OMF UPDATE

Strength management for officers deployed in support of Operation DESERT SHIELD requires that the PERSCOM Officer Master File (OMF) be updated to reflect each officer's deployment.

Currently, deployed units remain assigned to their continental United States (CONUS) commands, and there is no automatic means of updating an officer's deployed status on the OMF. PERSCOM must therefore rely on local personnel service centers (PSCs) to update the OMF.

There are two ways for a PSC to accomplish this requirement:

- PSCs that have access to the Officer Distribution and Assignment System (ODAS) may update the command codes of their assigned officers directly on the OMF.

They do this by accessing each officer's ODAS Officer Record Data display and updating the Officer Personnel Management Directorate current command code on screen 11. The PSC replaces the existing command code with a CT for active component officers, a CU for activated U.S. Army Reservists, or a CV for activated Army National Guard officers. These command codes indicate an officer's deployment and may be removed if an error is made or when the officer returns.

- PSCs that do not have access to ODAS must submit a Current Duty Assignment Transaction (CDAT) SIDPERS transaction with special characters to generate the command code update during the weekly SIDPERS OMF update.

Both of these methods are described in detail in Quickfire MILPER Message 90-248 transmitted 301505Z August 90.

The PERSCOM point of contact for

the deployment status of warrant and commissioned officers is Mr. Ron Johnson at AUTOVON 221-7895/5124.

JOINT ASSIGNMENTS

Joint duty assignments are extremely important. Officers serving in these assignments, as a group, are expected to be promoted at a rate equal to or greater than the current promotion rates by grade and competitive category.

PERSCOM now tries to send an officer to joint duty earlier, as a major or in some cases as a lieutenant colonel. An officer can then get full joint credit after two years in a joint assignment if his follow-on assignment is to an operational billet such as battalion commander or executive officer/S-3. This is known as a critical occupational specialty (COS) takeout. It offers the advantages of joint tour credit and duty away from troops but for only two years, and it keeps a highly competitive officer in the running for flag rank.

JOINT DUTY TOUR LENGTHS

The length of a Joint Duty Assignment List (JDAL) tour, mandated by law, is three years for field grade or company grade officers assigned to this list and two years for general officers. (Tour length is computed down to the actual day; there is no rounding up or down.)

An individual waiver signed by the Secretary of Defense is required to move any officer before he completes his full tour, with the following exceptions:

- When the prescribed tour length is less than 36 months (per Army Regulation 614-30, Overseas Service), an officer may move out of the position

at the end of the specified tour length. To receive full joint duty credit, his accompanied overseas tour must be at least 24 months.

- A combat arms officer in a critical occupational specialty may be taken out of a joint duty assignment after 24 months if it is an initial tour and the officer is being reassigned to meet the Army's operational requirements.

- Retirement, personal hardship, and suspension from duty are all reasons to move without a waiver.

- Under certain circumstances, an officer may add the time in current and prior joint duty assignments to accumulate enough credit to qualify for a full tour.

- The law also allows for a limited number of officers to be pulled 60 days before tour completion to meet Army requirements, but this cannot be used for the convenience of the officer involved.

Except for a limited number of waivers, any officer selected for brigadier general must have credit for a full joint duty tour. There are not enough joint duty positions to allow every officer this opportunity.

Some officers do not even need joint duty because of their branch or functional areas. For the benefit of the total Army, however, those who do must receive these tours as early in their careers as possible.

Any questions about tour lengths may be directed to the Joint Management Office at AUTOVON 221-8129.

ENROLLMENT IN NON-RESIDENT CAS3

Effective 1 October 1990, all officers managed by the Officer Personnel Management Directorate (OPMD) who are in Year Group (YG) 1979 and later

will automatically be enrolled in the non-resident portion (Phase I) of the Combined Arms and Services Staff School (CAS3) when they graduate from the officer advanced course.

Unless otherwise authorized, officers enrolled in Phase I must complete the non-resident correspondence course within 24 months of their enrollment. Requests for extension must be approved in writing by the director of the School of Corresponding Studies, U.S. Army Command and General Staff College (CGSC).

Officers must successfully complete Phase I before attending resident instruction at Fort Leavenworth. They receive certificates of completion for Phase I if they pass the comprehensive examination with a minimum score of 70 percent.

Under the revised policy, OPMD-managed officers must graduate from the resident course (Phase II) before attending any college — such as the Air Command and Staff College — that produces Military Education Level (MEL) 4. The same requirement applies to officers who intend to enroll in non-resident courses for these schools.

It is also important to understand that graduation from CAS3 is not a criterion for selection for CGSC or for promotion to major. However, officers will not be slated to attend CGSC or an equivalent college until they attain MEL N—CAS3 graduate.

Officers in special branches — the Judge Advocate General Corps, Army Medical Department, and Chaplain Corps — are not affected by this policy change, with one exception. Medical corps officers in the 67 series will attend under the same criteria as other OPMD-managed officers.

Reserve Component officers are not affected by this policy change.

PREFERENCE STATEMENTS

Many officers feel that their preference statements have little effect on their

future assignments, and to some degree, they are right. Here are some possible reasons: Many officers do not bother to fill out their preference statements at all; they do not take the time to update their statements; or their requests are unreasonable or unrealistic.

The primary considerations in making assignments are the needs of the Army, the needs of the individual, and the desires of the individual. Assignment officers make every reasonable attempt to learn what an officer desires, but DA Form 483 is not the best tool to use in relaying your assignment wishes. It allows you to submit only general requests, and it is not always processed as quickly as it should be.

You can help yourself most by taking the time to write a letter (it can be handwritten) to your assignment officer at PERSCOM. Tell him when you think

you will be available, taking into consideration leave and travel time between stations, and give at least three preferences for assignment and three for location. If you have some specific jobs or locations in mind, list them; be sure to let your assignment officer know if you have any special needs (exceptional family member or working spouse).

The timing of the letter is important. Assignment windows are six months before assignments in the continental United States (CONUS) and nine months for assignments outside CONUS. We recommend that you send your letters two or three months before these assignment windows.

Help yourself by letting us know what you want to do. And be realistic. Officers who ask for unrealistic assignments lose their votes as to preference.

SENIOR OFFICER LOGISTICS MANAGEMENT COURSE

The Senior Officer Logistics Management Course (SOLMC) is specifically designed to update commanders and their primary staff officers at the battalion and brigade level on logistics matters.

The course includes maintenance, supply, and transportation procedures as well as offering hands-on experience with vehicles, weapons, ammunition, and medical, communications, NBC, and quartermaster equipment.

The course is open to officers in the

rank of major and above in the Active Army and the Reserve Components, the U.S. Marine Corps, and from allied nations, and to Department of Defense civilians in the grade of GS-11 and above.

The one-week course is conducted ten times during each year at Fort Knox, Kentucky. Class quotas may be obtained through normal Training and Doctrine Command channels. (Class schedules for the remainder of FY 1991 and for FY 1992 are shown here.)

Further information is available from CPT Hammerle, AUTOVON 464-7133/3411 or commercial (502) 624-7133/3411.

CLASS	FY 91	FY 92
1	— — — — —	20 Oct - 25 Oct 91
2	— — — — —	5 Jan - 10 Jan 92
3	— — — — —	26 Jan - 31 Jan 92
4	— — — — —	8 Mar - 13 Mar 92
5	7 Apr - 12 Apr 91	29 Mar - 3 Apr 92
6	28 Apr - 3 May 91	5 Apr - 10 Apr 92
7	19 May - 24 May 91	26 Apr - 1 May 92
8	9 Jun - 14 Jun 91	10 May - 15 May 92
9	18 Aug - 23 Aug 91	31 May - 5 Jun 92
10	15 Sep - 20 Sep 91	20 Sep - 25 Sep 92

BOOK REVIEWS



Once again we are privileged to bring to your attention a number of interesting and informative publications. Here are several we recently received for review:

• **THE EAGLE AND THE DRAGON: THE UNITED STATES MILITARY IN CHINA, 1901-1937.** By Dennis L. Noble (Contributions in Military Studies 102. Greenwood Press, 1990. 264 Pages. \$39.95). This is one of those "new military history" books that we have been hearing about in which the author concentrates on the social composition of the particular military units he is studying. In this book, the author, despite the limited data he had to work with, focuses his attention on the soldiers of the Army's 15th Infantry Regiment, the sailors who manned the ships of the Asiatic Fleet and the gunboats on China's inland waterways, and the Marines who served both ashore and afloat during the 1920s and 1930s in China and the surrounding waters.

In his various chapters, he examines the men and the nature of their duties, their off-duty pursuits, how they perceived China and the Chinese, and, finally, why some of them chose to remain in China when their terms of service ended. Along the way, he destroys many of the myths that have grown up about duty in China in the 1920s and 1930s and about the men who performed that duty.

This is a most interesting book that all Infantrymen are encouraged to read.

• **THE UNITED STATES ARMY: A DICTIONARY.** Edited by Peter G. Tsouras, Bruce W. Watson, and Susan M. Watson (The Garland Series on U.S. Military Affairs. Garland Publishing, 136 Madison Avenue, New York, NY 10016, 1991. 898 Pages. \$125.00). Although this dictionary is billed as "an academic reference for the serious researcher of the U.S. Army," it is far

more than that. It can certainly be of tremendous value to those in the news media who cover Army affairs; it can be of value to the editors of military-oriented publications; and it can certainly be of help to service school instructors and military doctrine writers. At the same time, the Infantrymen in our field units can learn a lot about their profession simply by wandering through the dictionary's pages, stopping occasionally to peruse the entries.

The dictionary contains a list of acronyms in addition to the actual dictionary entries. Unfortunately, a number of the more current acronyms are missing—SIMNET, LRSU, SOCOM, LOSAT, and NLOS, for example. Strangely, the dictionary does not have an entry for Rangers.

Each dictionary entry does have at least one reference source and many of the entries are cross-referenced. The information in the entries is drawn largely from unclassified official DOD and DA publications.

• **OPERATION JUST CAUSE.** By Lieutenant Clarence E. Briggs III (Stackpole Books, 1990. 176 Pages. \$17.00, Softbound). The author was a rifle company executive officer in the 82d Airborne Division during Operation JUST CAUSE in December 1989. His book is a combination field manual, personal experience monograph, and solid combat narrative. Unfortunately, there is too much of the first two and too little of the last.

His unit arrived in Panama some days before the operation began and managed to get in some good, solid training—not necessarily of the right kind—before JUST CAUSE kicked off. When it did, the author found that his unit had not been properly trained to do all of the things it was eventually called on to do. His unit's experiences, therefore, offer a number of excellent

lessons for all infantry small unit leaders who might be faced with taking part in similar operations in the future.

The author also learned very quickly one personal lesson that all combat infantrymen have learned: When the real bullets start flying, the face of war takes on a different hue. How he and his men faced up to the challenge is another aspect of the book worth considering, although his reasons why soldiers fight their countries' wars can and should be disputed.

• **THE FIRST GOLDEN AGE OF ROCKETRY: CONGREVE AND HALE ROCKETS OF THE NINETEENTH CENTURY.** By Frank H. Winter (Smithsonian Institution Press, 1990. 321 Pages. \$29.95). This is the first comprehensive book we have seen on the history of gunpowder rockets. The author, who is the assistant curator for rocketry at the National Air and Space Museum, emphasizes first the work done by the Englishman William Congreve (the Younger) in creating the world's first true rocket weapon systems, and then switches to the system made by William Hale, another Englishman. The author also tells of the use of rockets in combat operations, of rocket developments in other countries, mainly European, and of the use of rockets for maritime lifesaving purposes and for harpooning whales.

• **EARLY AIRCRAFT ARMAMENT: THE AEROPLANE AND THE GUN UP TO 1918.** By Harry Woodman (Smithsonian Institution Press, 1990. 254 Pages. \$29.95). Instead of writing a comprehensive history of early aircraft armament, the author concentrates on the actual weapons, ammunition, gunsights, and mounts that were in general use during World War I. He points out that the machine-guns that were used were originally ground weapons that had to be adapted

for use on aircraft—the Maxim, Hotchkiss, Lewis, Vickers, and Parabellum, among others—and that the entire war period was one marked by large-scale improvisation. (After reading this book, we could not help recalling the efforts of U.S. Army aviators in the 1950s and 1960s to find ways to mount machine-guns and rockets on their helicopters.) The book also contains a large number of photographs, and the author has done a fine job in finding and then expertly using the available written and photographic material.

• **A CONCISE HISTORY OF U.S. ARMY SPECIAL OPERATIONS FORCES WITH LINEAGES AND INSIGNIA.** By Geoffrey T. Barker (Anglo-American Printing Company, P.O. Box 41933, Fayetteville, NC 28309-1933. 1988. 218 Pages. \$25.00, Softbound). As might be expected, the bulk of this book (along with an addendum to the main body) is devoted to the lineages and insignia of all officially recognized special operations forces and their predecessors. It is comprehensive and seemingly complete. The author, a retired Special Forces officer, also includes a detailed index and a list of special operations associations. He has done a fine job in producing what must have been a true labor of love.

• **THE VISITOR'S GUIDE TO THE NORMANDY LANDING BEACHES: MEMORIALS AND MUSEUMS.** By Tonie and Valmai Holt (Hunter Publishing, Incorporated, Building 424, Raritan Center, Edison, NJ 08818. 1989. 256 Pages, \$12.95, Softbound). The authors not only describe the French province of Normandy, they also tell of the Allied preparations for the 1944 invasion and then of the various Allied beach landings and airborne operations. They include a number of suggested battlefield tours, plus sketch maps to help along the way. Each tour is both preceded and accompanied by a historical account. All the museums the authors consider worth visiting are also included, as are lists of hotels, restaurants, and tourist offices. This book is heartily recommended to anyone planning to visit Normandy this coming summer, or the World War II buff who wants a

somewhat different view of the 1944 D-Day operations.

• **THE MILITARY BALANCE, 1990-1991.** Published by Brassey's for the International Institute for Strategic Studies. (1990. 245 Pages. \$95.95). Although overtaken by more recent events in the Middle East, this authoritative annual publication remains an extremely useful reference tool. As usual, it assesses (and in some cases corrects) the military strength and defense spending of the 145 countries that maintain armed forces; the entries for each country detail the military organization and list equipment, manpower, and relevant economic data. As is usual, too, it contains essays on strategic arms control developments, short-range nuclear forces, and NATO and Warsaw Pact conventional forces. There is also a loose insert map of Europe that depicts the deployment of key land and air equipment affected by the Conventional Forces in Europe treaty.

• **BRIDGING THE IMJIN: CONSTRUCTION OF LIBBY AND TEAL BRIDGES DURING THE KOREAN WAR (OCTOBER 1952-JULY 1953).** By William R. Farquhar, Jr., and Henry A. Jefferson, Jr. Edited and with an Introduction by Charles Hendricks (Studies in Military Engineering Number 5. Office of History, United States Army Corps of Engineers, 1989. USGPO S/N 008-022-00266-9. 166 Pages. \$5.00, Softbound). The two authors were serving U.S. Army officers when they prepared the original narrative report on which this publication is based. In brief, they tell of the accomplishment of a difficult wartime assignment by the 84th Engineer Construction Battalion. The editor has kept much of the original report and various addenda, as well as 46 of the original 57 photographs. To this number he has added 31 others drawn from various collections. To those Infantrymen who have served in Korea in or near the DMZ and who remember the tremendous flooding problems they faced almost every summer, this bridging effort will be recognized for the tremendous and innovative feat it was.

• **ARMY OFFICER'S GUIDE. 45th EDITION.** By Lieutenant Colonel (Retired) Lawrence P. Crocker (Stackpole Books, 1990. 608 Pages. \$17.95, Softbound). In this revised and updated version of what has become a standard reference for old, new, and would-be Army officers, the author offers information on such topics as professional development, promotion procedures, pay and allowances, military courtesies and customs, social obligations, uniforms and insignia, and responsibilities of command. Although it is not an official publication, it has been supported by many Army agencies and read by knowledgeable active duty personnel to ensure its correctness. It also has a section of 16 color pages that show the Army's decorations, service medals, and badges. With graduations and commissioning services approaching, this makes an ideal gift to the young man or woman who might be contemplating an Army officer's career. Units might also consider purchasing copies for their soldiers who are selected for attendance at the Army's Officer Candidate School.

• **ENLISTED SOLDIER'S GUIDE. 2d EDITION.** By Sergeant Major (Retired) Dennis D. Perez and revised by Lieutenant John Warsinske (Stackpole Books, 1990. 224 Pages. \$12.95, Softbound). This informative publication has also been revised and updated and, like the first edition, gives the junior enlisted soldier an easy-to-use information resource. Although the book is designed especially for the first-termer and includes information on such topics as uniforms, pay and allowances, assignments, and educational opportunities, it also makes an excellent gift to a young man or woman who might be planning to join the enlisted ranks of the Army.

• **EISENHOWER: A CENTENNIAL LIFE.** Text by Michael R. Beschloss, photographs edited by Vincent Virga (An Edward Burlingame Book. HarperCollins, 1990. 253 Pages. \$29.95). This is the second such book we have seen that was published to commemorate the 100th anniversary of Dwight David Eisenhower's birth. The biographical narrative traces the former

president's life from birth to death, and in his concluding chapter, Michael Beschloss offers his thoughts on why Eisenhower's presidential reputation collapsed after he left office in 1961 and why it began to revive in the 1970s. He does not offer a similar assessment of Eisenhower's military abilities.

Most of the photographs have never before been published. Unfortunately, a number of them do not have captions, and the captions for others are inaccurate. Overall, though, the book is a fine tribute to an outstanding U.S. military and political leader.

Now here are a number of our longer reviews:

LIFE: WORLD WAR II. Edited by Philip B. Kunhardt, Jr. (Little, Brown, 1990. 440 Pages. \$50.00).

IMAGES OF WAR: THE ARTIST'S VISION OF WORLD WAR II. Edited by Ken McCormick and Hamilton Darby Perry (Orion Books. Crown, 1990. 453 Pages. \$65.00).

Both of these outstanding books have been published for the same reason—to commemorate the 50th anniversary of our country's entry into World War II. Each is organized differently, and each takes a unique editorial position.

The first contains more than 1,000 black-and-white photographs and dozens of maps and chronologies. The photographs were drawn from a variety of archives, including those of the U.S. Government and its World War II allies as well as the archives of those countries that were enemies. It should be pointed out that this book is an updated and completely revised version of LIFE's 1950 large-size World War II picture history.

The second book features the works—most in full color—of some 200 artists from 12 countries who were commissioned during the war by their governments to paint or draw their impressions of it. Fifty of the paintings in the book came from the Soviet Union, most never before available in the West. Some of the artists whose works appear in this book were already famous when the war broke out; others became famous after the war. A number died while covering the war. The editors believe that perhaps

one-third to one-half of the art works used in this book are of museum quality while the remainder are valuable primarily for the historical perspective they present.

"IT NEVER SNOWS IN SEPTEMBER": THE GERMAN VIEW OF MARKET-GARDEN AND THE BATTLE OF ARNHEM, SEPTEMBER 1944. By Robert J. Kershaw (The Crowood Press, Gypsy Lane, Swindon, Wiltshire SN2 6DQ, England. 1990. 364 Pages. Price on request).

The operation under discussion here, MARKET-GARDEN, was one of the major Allied ground-airborne operations conducted during World War II. Designed to thrust through the German defense lines, it turned into only a partial fulfillment of Field Marshal Bernard Law Montgomery's long-standing desire for a narrow, single-thrust Allied attack that would carry through to Berlin.

Although the operation has received extensive coverage from the Allied side, this is the first English-language published account we have seen of the same operation from the German point of view. Put together by a serving British Army officer, it is an outstanding work in that it contains much material that has never before been published, including interviews with German survivors, photographs from SS archives, and interesting new conclusions.

Students of World War II military operations and airborne enthusiasts should not overlook this book. The German reaction, in particular, was quick and decisive and can serve as a model for the study of anti-airborne operations. By the way, the title is a quotation from a remark made by a German participant as he look skyward on 17 September 1944 to see the mass of descending white parachutes below which dangled U.S. and British paratroopers.

RUSSIAN ROULETTE: AFGHANISTAN THROUGH RUSSIAN EYES. By Gennady Bocharov. Translated from

the Russian by Alyona Kojevnikov (A Cornelia and Michael Bessie Book. HarperCollins, 1990. 187 Pages. \$18.95). Reviewed by Captain Paul Vivian, United States Army National Guard.

Only a few years have passed since Soviet troops left Afghanistan. But the Soviets are just now trying to come to terms with their Afghan War experience. This book is the latest and one of the best efforts to discuss the meaning of the war for the Soviet Union.

The book itself is a "fun read," although for a reader looking for insights into the conduct of Soviet military operations in Afghanistan, it will be a disappointment. It more properly belongs to the soul-searching genre of military literature: Why were we in Afghanistan? What did we achieve? These are the underlying questions the book addresses. Bocharov's answer, however, is unambiguous. To him the war was unjustified and a terrible waste of fine, young, Soviet men.

Bocharov is a prominent correspondent for the weekly newspaper *Literaturnaiia Gazeta* (*The Literary Newspaper*). He is not a soldier, but he evidently had had some military experience because he seems to understand the soldiers so well. His portrayal of those soldiers is clearly in the romantic, socialist style. For example, the hero of each chapter is inevitably a good, simple boy from a farm or a small town. He is conscientious and hard-working, and he does his duty without question. And when the young man is seriously wounded, or maimed, or killed, this literary device allows Bocharov to ask the question: "Why this good boy?" and "Was the cause worth the sacrifice?"

In the course of eight years, Bocharov made numerous trips to Afghanistan. His activities in that country are described in a matter-of-fact manner. But there is an underlying sense of duplicity. For while he saw much, he reported little. After all, this was the system, and Bocharov describes in detail how the censorship system worked. But as he makes clear, most of the censorship was self-imposed. Although he never says so explicitly, he communicates a

feeling of sorrow and sinfulness at his inability and failure to communicate the true nature of the Afghan War.

This is not a deep book, but it is a thought-provoking one. If there is a lesson for soldiers in it, it is not that wars are always wrong, but rather that wars must be just in order to warrant the cost in human suffering. Gennady Bocharov believes that many good, young Soviet men were maimed or killed in an unjust cause.

HANGING SAM, A MILITARY BIOGRAPHY OF GENERAL SAMUEL T. WILLIAMS: FROM PANCHO VILLA TO VIETNAM. By Colonel Harold J. Meyer (University of North Texas Press, 1990. 183 Pages. \$16.95). Reviewed by Major General Herbert J. McChrystal, Jr., United States Army Retired.

Lieutenant General Samuel T. Williams is one of the Army's genuine characters. Despised by some, admired by many, revered by not a few, General Williams left a bold and unequivocal mark. He was unique. The author of this biography has created an accurate, detailed, and highly interesting picture of how this man combined average intelligence with incredible tenacity and dedication to excellence to become a top-notch field soldier.

Williams joined the Army in 1917, fresh out of high school. He was a competitor, a perfectionist. He earned a commission and performed with distinction during World War I. By 1943, he had overcome his lack of formal education, disqualifying eyesight, and an initial weakness in administrative skills to become a brigadier general and assistant commander of the 90th Infantry Division.

In Mid-July 1944, little more than a month after the division had landed in Normandy, disaster struck. Williams was relieved and reduced to the rank of colonel. According to most knowledgeable witnesses, he was the victim of an effort to preserve the career of his division commander. It had not helped for Sam, in a fit of disgust, to

suggest his commander was a coward.

The author paints a vivid account of this amazing man's refusal to accept defeat. His fight to regain his personal dignity and military reputation was not fought over what might have been. Instead, Williams sought the toughest post-war job of all—command of troops. In those days, few wanted the job. Units were in shambles. Moreover, command posed high risks for his career. He succeeded, turning his 26th Infantry Regiment into a premier unit. After regaining his star, he went on to command the 25th Infantry Division in Korea. Finally, after being awarded his third star, he was selected to help South Vietnam build its army.

General Williams carried a heavy personal cross—his explosive personality. He could, and often would, ignite in a blast of colorful invective when first encountering anything or anyone he thought failed to meet his standard. Subsequently, however, he would normally withdraw to a more balanced reaction. He was not a mean man who delighted in humiliating people, as do some. He reacted from frustration or disbelief that the offender did not grasp his responsibility or the urgency of the situation with the same intensity as he did. Down inside, Sam was a warm and compassionate man.

On occasion, though, his explosiveness got in the way. His tendency to "shoot the messenger" sometimes cut him off from reliable sources of information. The author relates a chilling tale of an informant net that Sam resorted to within the 26th Infantry to the discomfort of a number of his subordinate commanders.

Jack Meyer's book is fascinating for those of us who lived through parts of Hanging Sam's story without knowing all of it. For those of you who fancy yourselves future senior leaders, this book contains many valuable pointers. Sam was a real "pro."

SECRETS OF THE VIETNAM WAR. By Lieutenant General Phillip B. Davidson (Presidio, 1990. 214 Pages. \$18.95). Reviewed by Doctor Joe P.

Dunn, Converse College.

General Davidson's first book, *Vietnam at War* (1988), is the best military history of the Vietnam War. This sequel volume, written as an interpretative memoir by the MACV J-2 from 1967-1969, is an equally valuable contribution.

About one-half of the book deals with the order of battle numbers controversy that resulted in the Westmoreland versus CBS lawsuit. As he provides the background and clarifies the issues, Davidson devastates the Sam Adams and CBS charges. In the second half, Davidson explains the reasons the war was fought as it was, the causes for the failures in strategy, and the implications of many of the political and military decisions. He also addresses the myths that still persist about the conflict. In the growing number of "why we lost" summations, this is one of the very best analyses.

Like his first book, this is a must for anyone who contemplates the lessons to be learned from the Vietnam experience. As I read the slim volume in one sitting (unable to put it down), I was struck by its value to us in thinking about the present Gulf crisis.

General Davidson has done it again.

RECENT AND RECOMMENDED

THE DUEL: 10 May-31 July 1940: THE EIGHTY-DAY STRUGGLE BETWEEN CHURCHILL AND HITLER. By John Lukacs, Ticknor and Fields, 1991. 224 Pages. \$19.95.

JACKBOOT: THE STORY OF THE GERMAN SOLDIER. By John Laffin. First published in hardcover in 1965. A David and Charles Military Book. Sterling, 1990. 272 Pages. \$8.95, Softbound.

BALLISTIC MISSILES IN THE THIRD WORLD: THREAT AND RESPONSE. By W. Seth Carus. Praeger, 1990. 104 Pages. \$34.95.

TERRORISM AND THE MEDIA: DILEMMAS FOR GOVERNMENT, JOURNALISM, AND THE PUBLIC. By Yonah Alexander and Richard Latter. Brassey's (U.S.), 1990. 147 Pages. \$19.95.

PEOPLE AT WAR, 1939-1945. Edited by Peter Moynihan. First published in hardcover in 1974. A David and Charles Military Book. Sterling, 1990. 216 Pages. \$8.95, Softbound.

THE OXFORD BOOK OF CANADIAN MILITARY ANECDOTES. Edited by Victor Suthren. Oxford University Press, 1989. 202 Pages. \$29.95.

From The Editor

THE 3 Rs: READIN', RITIN', AND REPUTATION

All too often professional development is a subject infantrymen talk about but take few steps to put into action. The infantryman cannot rely solely upon the service school or staff college to provide the professional development and expertise he needs to maintain his proficiency in the combat arms. There is a very real need for him to read and write within his profession. Traditionally, though, soldiers have cherished their image as men of action and have looked down their noses at the intellectuals who were left to write the history and postwar critiques of the military system.

Reading professional journals broadens your knowledge, generates ideas, and improves your credibility by expanding the experience base from which you draw judgment and opinion and ultimately make recommendations. In like manner, writing a professional article is good practice for thorough staff work. And in staff work, your reputation is on the line. It is evaluated by your ability to express yourself concisely and accurately. Research is a must, and few bosses will accept the "quick fix" and "seat of the pants" solution to a problem.

INFANTRY, your professional journal, is an excellent companion. It provides the latest training techniques from all over the world, book reviews to keep you abreast of current subject material, and a forum through which you can exchange ideas with other professionals.

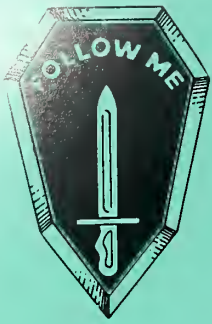
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